DOCUMENT RESUME

ED 132 385 CE 009 151

AUTHOR Knopf, Lucille
TITLE Graduation and Withdrawal from RN Programs. A Report of the Nurse Career-Pattern Study.
INSTITUTION Health Resources Administration (DHEW/PHS), Bethesda, Md. Div. of Nursing.
REPORT NO DHEW-HRA-76-17
PUB DATE Nov 75
CONTRACT PHS-No1-NU-04117
NOTE 165p.; For a related document see ED 072 200
AVAILABLE FROM Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 (Stock Number 017-041-00102-5, $1.60)

EDRS PRICE MF-$0.83 HC-$8.69 Plus Postage.
DESCRIPTORS Academic Achievement; Attendance; Careers; Comparative Analysis; Dropout Attitudes; Dropout Characteristics; Dropout Research; Dropouts; Educational Programs; Educational Research; *Graduates; Graduate Surveys; *Health Occupations Education; Higher Education; Longitudinal Studies; Nurses; *Nursing; *Professional Education; Program Attitudes; Student Attitudes; *Student Characteristics; Tables (Data); Teacher Attitudes; *Withdrawal

ABSTRACT

Based on a larger longitudinal study, this document examines three nursing groups--those entering schools preparing registered nurses in 1962, 1965, and 1967. It describes and compares those who graduated and those who withdrew before graduation and examines the reasons why the students withdraw from both the students' and the program directors' points of view. The contents include 7 chapters, 47 tables, and four appendixes. Chapter headings are (1) The Nurse Career-Pattern Study, (2) Graduation and Withdrawal, (3) Variables Related to Graduation/Withdrawal, (4) School Variables and Graduated/Withdrew, (5) Reasons for Withdrawal, (6) Activities of Withdrawals after Leaving Nursing School, and (7) Discussion and Recommendations. (HD)

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GRADUATION AND WITHDRAWAL FROM

PROGRAMS

A REPORT OF THE NURSE CAREER-PATTERN STUDY

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ED132385

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Health [illegible]ower References

DHEW Publication No. (HRA) 76-17

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PUBLIC HEALTH SERVICE ■ HEALTH RESOURCES ADMINISTRATION
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The study upon which this publication is based has been assisted by Public Health Service contract N01-NU-04117.

Division of Nursing project officers are Helen H. Hudson, Program Analyst, and Evelyn B. Moses, Statistician.

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FOREWORD

In 1962 the National League for Nursing initiated the Nurse Career-Pattern Study—a longitudinal study designed to obtain definitive information on nursing students, their biographical characteristics, their occupational goals, their reasons for choosing a career in nursing, and their contribution to the health field after graduation.

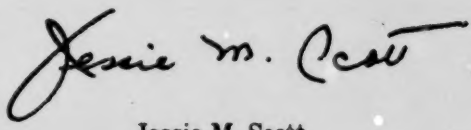
The study is of particular interest to the Division of Nursing, which has responsibility for developing and augmenting information about nursing needs and manpower resources. Therefore, since enactment of the Nurse Training Act of 1964, the Division has supported the extension of the study to include information on student groups entering registered nursing programs in 1965 and 1967.

The Division has utilized information obtained from the first stages of the study in reports on the progress made under the legislation for the improvement of nurse training. As the study progresses, the accumulating data are increasingly helpful in providing a firm base for measuring the impact of Federal aid on nursing education and nursing services.

This publication looks at the three nursing student groups in the study as a whole—those entering schools preparing registered nurses in 1962, 1965, and 1967. It describes and compares those who graduated and those who withdrew before graduation. It examines the reasons why the students withdrew from both the students' and the program directors' points of view. Mrs. Lucille Knopf, who has been the Director of the project since 1969 and formerly worked as a Research Associate for the study, is the author of the report.

Two other comprehensive reports of this study have been published. The first, published by the Division of Nursing in 1972, was titled *From Student to RN: A Report of the Nurse Career-Pattern Study* and examined various aspects of the characteristics and career plans of the participants in the study. The second report, *RN's: One and Five Years After Graduation*, was published by the National League for Nursing in 1975 and examined the career patterns of those who entered registered nursing programs in 1962.

Additional reports will be published at intervals as data are collected and analyzed.



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Chapter I

THE NURSE CAREER-PATTERN STUDY

Change has been the overriding characteristic of nursing education for the past 20 years. Some changes have been transitory, but others are now permanent. For example, the number of associate degree and baccalaureate programs has increased, many diploma programs have closed, and there has been wide experimentation in curriculums. Further, in practically all programs, teaching methods and requirements for graduation have been revised, application of open curriculum principles has been adopted, and students generally in the minority in schools of nursing—men, married, and minority ethnic—have been more readily admitted.

The most recent count lists 598 associate degree, 461 diploma, and 313 baccalaureate programs. In 1965, there were 177 associate degree, 821 diploma, and 198 baccalaureate programs. Ten years earlier, in 1955, there were only 19 associate degree but 963 diploma and 156 baccalaureate programs. In 1974, about 43 percent of all basic program graduates were from associate degree, 32 percent from diploma, and 25 percent from baccalaureate programs; but in 1965, 77 percent, and in 1955, 90 percent of all graduates were from diploma programs (*1, 2, 3*).[1]

Data of a 1971–72 survey indicate a slow but steady increase of men and ethnic minority students in basic programs (*4*). Behind these statistics lies a 20-year history of nursing's rapid acceleration from hospital-based training programs to an acceptable discipline in institutions of higher education—changes often accompanied by struggle, sometimes apprehension, and frequently with the opposition of nurses themselves.

It was anticipation of change and an awareness of the need to understand and study the ramifications of these changes, especially those related to students and graduates of the three different registered nurse programs, that led the National League for Nursing to decide in the early sixties to undertake the Nurse Career-Pattern Study.

[1] Numbers in parentheses refer to literature cited in reference lists following the chapters.

Background and Purpose of the Study

During the early 1960's, when the "shortage" of nurses was a paramount problem, there was a great deal of pressure on nursing to produce more graduates and to keep nurses in the work force after graduation (*5*). Questions of recruitment into nursing, supply and demand, and utilization of manpower skills were compounded by the question of whether there were differences in the expected levels of performance of graduates of the three types of programs preparing for registered nurse licensure.

The need for a different system of education for nurses and an ever-increasing supply were readily acknowledged. And, as Margaret Bridgman said: "The problem came to be recognized as the double one of overcoming the handicap of long continued lag in educational development and at the same time trying to catch up with a runaway demand for more and more, better prepared nurses (*6*)." An NLN official statement in 1960 described the characteristics and goals of the four different basic nursing programs (*7*). Although the goals of the practical nursing program were easily distinguished from the other three programs, and although the baccalaureate program alone was recognized as preparing for admission to graduate programs in nursing and beginning practice in public health nursing, there remained a great deal of confusion among educators, employers, and especially potential students regarding the real differences in the three registered nurse programs.

It was against this background that certain persistent questions were being raised for which there were no evaluative or experiential responses. *In terms of biographical characteristics, to what extent are the students who attend the four different types of nursing programs similar or different?* Are the four nursing programs drawing from the same population of potential students? What are the biographical characteristics of entering students? Do these characteristics differ by program? *Do potential students choose the program most suited to their needs, goals, and talents?* Are students sufficiently informed about available nursing programs? Do they perceive a difference in the programs? Are their reasons for choice of program consistent with the stated description of the program?

Since service requirements were felt at all levels and in most areas of nursing practice, there were a great many unanswered questions about nurses after graduation. *What are the career plans of nursing students?* Are these plans related to the type of program from which the student is graduated? Do career plans change between admission and graduation? *What are the occupational roles as described by position, clinical area, and employer after graduation?* Are career plans before graduation and occupational role after graduation similar? Are positions described the same or differently depending upon the basic nursing program attended? Do

occupational roles change? At what point after graduation do occupational changes occur? *What are the describable career patterns of nurses after graduation?* Do registered nurses leave the nursing labor force? If so, when and why? Do they find employment in other nonnursing areas or simply stop working? Having once left nursing, do nurses return to nursing work? If so, when and why?

In an effort to understand and describe the students entering basic nursing programs and graduates' contributions to nursing, it was natural to raise questions about those who are not graduated. For many years, when the diploma program was predominant, about a third of all students withdrew before graduation (*8*). As nursing education moved into junior colleges and as baccalaureate programs increased, it could not be predicted accurately if withdrawal would continue at that rate or change. This added to the unanswered questions: *What are the withdrawal rates for the different types of nursing programs?* Are any of the characteristics describing students related to graduation or withdrawal? If so, which ones? Do descriptions of graduates and withdrawal differ by type of program?

This, then, is the context in which the Nurse Career-Pattern Study, a long-term longitudinal study of participants from the time they enter nursing school through their years as nurses, was launched.

Toward Quality in Nursing: Needs and Goals, Report of the Surgeon General's Consultant Group on Nursing, was published in 1963, a year after the Nurse Career-Pattern Study had been started. Among the recommendations of this group were suggestions for study of the role of recruitment into schools of nursing, return of the inactive nurse to practice, and the type of nursing education needed in relation to the responsibilities and skill level required for high quality patient care. Clearly, there was a need for data describing student nurses, graduates, and their eventual contribution to the nursing labor force. (9)

Selection of Longitudinal Method

It was expected that through following and surveying the same cohorts over a period of years a better picture of nursing students and graduates could be obtained than would be possible by other methods. The study also was anticipated to supply a descriptive data base from a national sample, which would be useful for comparison with both local studies and studies of future generations of nursing students and graduates. By monitoring changes in designated variables over a period of time, the longitudinal method provides both a description of events and the possibility of inferring causality. Data gathered at specific intervals would be current

information from participants and less subject to recall error than data gathered *ex post facto.* Subgroups which emerged could be studied in relation to the criteria being investigated. (A study of graduates from previous years was a part of the original plan but was later abandoned for lack of funding. However, obtaining a representative sample of graduates of earlier years would have been an almost impossible task anyway, and reaching back more than 10 years from the inception of the Nurse Career-Pattern Study would have greatly diminished the number of associate and baccalaureate graduates available for study.) The main assumptions of Nurse Career-Pattern Study were: the respondents were representative of the student nurse population of the time; the questions asked over the years would supply the information desired; the intervals selected to ask these questions were adequate; and sufficient numbers of participants could be maintained in each data collection to make responses meaningful.

Fox states: "The major strength of the longitudinal design is that it avoids the assumption of comparability of different groups, by using the same respondents at every data-collection interval. Its weaknesses are the length of time required to obtain a complete set of data and the fact that continued exposure to the data-collection instruments and the research may produce a degree of sophistication or test-wiseness in the respondents which is reflected in the data (*10*)." Since the Nurse Career-Pattern Study was not testing participants, it was believed that the latter objection might not hold true in this case and that sophistication in response to questions might even be helpful. The advantages of a long-term study are described by Goldfarb: "... the longitudinal method permits the use of the far more dependable technique for inferring causation by watching the changes as the specified variables interact over a period of time. . . . A most important contribution of longitudinal data lies in its characterization of those who change . . . cross-sectional trend data hides the changes in individuals by a process of net balancing. . . (*11*)." Longitudinal methods have been used in demographic, growth, and genetic studies; in comparisons of scores on repeated intelligence or aptitude testing; in estimating public opinion changes; and in the fields of occupational and educational research (*12*).

At the eighth of a series of multidisciplinary workshops dealing with longitudinal research in health professions education, the longitudinal method was defined as "... a periodic assessment and/or measurement of change, or no change, in a specific sampling unit at designated periods of time appropriate for adequate evaluation. In this approach the sampling unit becomes its own control, and the measures at two separate points in time provide data on subtle shifts influencing the outcomes of development. The longitudinal

approach is not the only way to conduct educational research. However, for many questions, it is not only the best method but the required approach. . . (*13*)."

However, the arduous nature of data-gathering in the longitudinal method cannot be overestimated. This is especially true in such a study as the Nurse Career-Pattern Study in which data-gathering periods at graduation and after graduation are based on length of nursing program and extend over several years for any single questionnaire. Of critical importance, therefore, is the continuous attention to detail and record-keeping, not only of questionnaires but also of names and addresses. In addition, during the first few years after graduation there appear to be extensive name and address changes primarily because of women who change their marital status.

Nevertheless, the longitudinal method was assessed as being the best approach for understanding the career patterns of nurses, and the study was planned essentially to provide descriptions of events which could lead to hypothesis-generating rather than hypothesis-testing. In fact, the question of whether or not all research should be directed to hypothesis-testing has been raised by Bakan. Although Bakan discusses research in psychology, his application to this study is appropriate: "The preconception of the alternatives, and the disciplined limitation of the investigation to them, cuts out the possibility of surprise, the learning of something which was not thought of beforehand (*14*)." Analysis of longitudinal survey type data can lead to more precise delimitations of future areas of inquiry. In addition, unanticipated changes have occurred during the Nurse Career-Pattern Study which, in turn, have produced expansion, modification, or additions to the study as originally planned.

Enormous amounts of data have been gathered and are being published periodically, usually by topical approach. The data of this study, being enumerative and totally the result of broad categorization from responses to mail questionnaires, can be viewed as part of a process of studying the possibility of occurrence or nonoccurrence of events rather than pinpointing unquestionable fact. Naturally, where findings described appear logical and consistent with generally held assumptions, they will be more readily acceptable. It may even become a case of the data simply demonstrating already regarded truisms. However, this is also a valid application of data interpretation, i.e., that truisms substantiated by observable facts are a better basis for judgment than guesses. Analysis of the data has been designed to provide for description by incidence, and to compare a specific characteristic with a later event. For example, the number of married students is available from the initial questionnaire. At an appropriate time in the study, the number who

were married at entrance to the participating nursing programs can be described as graduated or withdrawn or working or not working in nursing.

Plan of the Nurse Career-Pattern Study

The study was planned as four concurrent studies with samples drawn, students surveyed, and graduates followed by type of nursing program. Although the unit of sample was the nursing school, the study describes individuals and, therefore, is not a comparative study of nursing programs. The study began with students entering a sample of practical nursing, diploma, and baccalaureate programs in the fall of 1962. In addition, all but eight of the then existing associate degree programs participated in the study. Results of the practical nurse sampling—students, graduates, data of 5 years after graduation, and some data from 10 years after graduation—have been published (*15*).

This report is confined to registered nurse students and graduates. In addition to almost all the associate degree programs, the initial sampling included 14.7 percent of diploma and 39.1 percent of baccalaureate programs. After passage of the Nurse Training Act of 1964, the Division of Nursing, Department of Health, Education, and Welfare, provided financial support for the study. At that time also, two additions were made to the study: replication of the study with students entering the three registered nurse programs in 1965 and 1967 and a questionnaire to students who withdrew before graduation. Diploma and baccalaureate schools in the original study were retained throughout successive years (except for diploma schools which closed, one baccalaureate program which could no longer continue and, in 1967, two baccalaureate programs which had changed their admission date for students).

During these years (1962 through 1967) a number of new associate degree programs opened. For the 1965 sample, all associate degree programs were again asked to participate and all but 12 did so. All but three of these programs were retained for the 1967 sample (*16*).

The total number of individuals included in the study is 42,730: 13,852 who entered associate degree programs, 15,468 who entered diploma programs, and 13,410 who entered baccalaureate programs. Of this group, 26,365, or 62 percent, have been graduated.

In this study, biographical information, reasons for choice of nursing, specific program and school, and early career plans were collected from entering students. In addition, biographical data and career plan information at the time of graduation were updated, time and reason for withdrawal obtained, and subsequent educational and employment activities for those who did not complete the program sought. Graduates continue to be surveyed at 1, 5, 10, and

15 years after graduation. At the time this report is written, the study is into the fifth year after graduation for the 1967 group, and 10 years after graduation for the 1962 group. Reports, therefore, of the 10th year and 15th year after graduation are still to be done. A decision was made to terminate the followup surveys with the 1965 group at 1 year after graduation.

All Nurse Career-Pattern Study questionnaires are gathered by mail. The questionnaires completed at the time of entrance and shortly before graduation were sent in packages to the participating schools. Each package contained questionnaires, explanatory letters to student participants, stamped return envelopes, and instructions to the school staff responsible for distribution of the questionnaires. Respondents were instructed to place completed questionnaires in the envelopes, seal them, and return them to the school staff member who would mail them to NLN. It was believed if one responsible individual mailed the questionnaires a better return would be insured. Questionnaires gathered after graduation are mailed to each individual at his home address. Detailed data-gathering procedures of these questionnaires have been described elsewhere (*17*).

This particular report deals with only one aspect of the study: graduation or withdrawal from nursing school. The findings are reported by type of nursing program and, for the most part, data from all 3 years, 1962, 1965, and 1967, have been combined.

Biographical Characteristics of Nurse Career-Pattern Study Participants

In order to understand graduations and withdrawals from any educational program, knowledge of the characteristics of the total entering group is necessary. Biographical and other variables from the questionnaires completed at the time NCPS participants entered the nursing programs have been published by year of entrance and by type of program (*18*). Some of the variables pertinent to this report are reproduced in appendix A, tables A1 to A12, again by type of nursing program, but here with all years combined.

Most of the students who entered the schools in this study were women; the highest proportion of men was found in associate degree programs, 4.2 percent. Almost all those entering diploma and baccalaureate schools were 19 years of age or younger, single, and white. About 24 percent of the associate degree entrants were married, and almost 5 percent had been married at one time (separated, divorced, or widowed); about 41 percent were 20 years old or older; and 7 percent (the highest of the three programs) were black. The questionnaire item gave a choice of "white," "Negro," "Oriental," and "other (specify)." In keeping with current usage,

"black" in the text and tables refers to students who checked the option "Negro." Religious preferences of the respondents were similar for the associate and baccalaureate degree, with 31 percent Roman Catholic, somewhat over 62 percent belonging to other Christian religions, and between 2 and 3 percent Jewish. For diploma entrants, the proportion of Roman Catholics was higher, 40 percent, and those belonging to Protestant denominations or Jewish less than the other two programs.

Most of the diploma and baccalaureate students reported having been in the top fourth of their high school classes, 48 and 62 percent, respectively, while the highest proportion of associate degree students, 40 percent, said they had been in the second fourth of their high school classes. Very few students in any of the programs reported having been in the lowest quarter in high school. Generally, students were attending nursing schools in the same States in which they had gone to high school; but students in nursing schools in different States were more than likely baccalaureate students. About 17 percent of those entering the associate degree program had previously attended nursing school, and some of these were graduates of practical nursing programs. Only small proportions of diploma and baccalaureate entrants had been in a nursing program previously, 4 and almost 3 percent, respectively.

Descriptions of fathers' occupations, education, and social index classification are similar for the associate degree and diploma students and somewhat different for the baccalaureate students. Fathers of associate degree and diploma students most frequently were skilled workers (22.4 percent and 25.8 percent respectively) or sales/clerical workers (20.5 percent and 23.2 percent). Somewhat over 10 percent of the fathers of the students in these two programs were classified as professional or semiprofessional workers. The same three occupational categories were predominant among the baccalaureate students but in a different order and proportion: about 23 percent of the fathers were sales and clerical workers, followed by almost 19 percent who were professional and semiprofessional workers and about 17 percent who were skilled workers. Also, slightly over 6 percent of fathers of baccalaureate students were identified with the health field, almost equally divided between physicians and other health workers. Fathers in the health field were proportionately lower for the associate degree and diploma students (*19*).

More than a third of the fathers of students in associate degree and diploma programs had fewer than 12 years of education and another 29 to 33 percent had completed 12 years of schooling. About 22 percent of fathers of baccalaureate students had fewer than 12 years of education, and equal proportions (28 percent each) had either 12 years and 16 years or more education.

A social index classification was assigned to fathers of the participants. Social index, one of the few variables derived from other variables, was not coded as a simple outright response. Using and modifying a method originally devised by Hollingshead, the title of the father's occupation and his years of education are given a weighted score. All possible scores are then grouped from the lowest to the highest until the scores comprise five groups. Social index one indicates a major profession and over 16 years of education. Social index five would indicate semiskilled or unskilled work and minimal education. Typically, position four would be assigned to a skilled worker or a sales/clerical worker with at least 12 years of education (*20*).

Although social index four was most frequent for fathers in all three groups, the proportions were different, reflecting the differences in fathers' occupation and education for those in associate degree and diploma programs as contrasted with those in the baccalaureate programs. More than 35 percent of the associate degree and 42 percent of the fathers of diploma students were assigned social index position four; this was followed in frequency by those at three on the index, about 16 and 21 percent, respectively. About 30 percent of the baccalaureate students' fathers were given classification four, 21 percent three, and another 30 percent higher on the scale, with about 1 in 10 at the highest level, one. Proportions for the lowest position on the scale ranged from 6 percent for baccalaureate to 11 percent for diploma students.

Family income information as reported by participants is similar for associate degree and diploma respondents. Between 20 percent associate degree and 22 percent diploma were at the lowest income level used in this study, about 43 percent and 45 percent at the next highest interval, and 29 percent and 23 percent in the higher income categories. Fourteen percent of baccalaureate degree students, on the other hand, reported family income at the lowest level; 36 percent were at the next highest interval and 39 percent at higher levels. The actual amounts reported must be viewed in relation to the years the data were gathered, 1962, 1965, and 1967 (*21*).

It is apparent that although students in all three programs are similar in some characteristics, there also are differences, which makes each cohort unique. The associate degree student body is more heterogeneous as regards sex, marital status, age, and ethnic group than those in the other two programs. These entrants probably were capable high school students, may very well have had some nursing school experience before admission to the associate degree program, and came from families of moderate means. The diploma students were relatively homogeneous as regards sex, marital status, age, and ethnic group. They were more likely to be

Roman Catholic than students in the other two programs, were good students in high school, and came from families of moderate means. Entrants to baccalaureate degree schools were young, white. and single, probablv very good students in high school, and may have come from families where the father had a higher educational level and income than fathers of students in the two other groups.

Biographical Characteristics of Students in Other Studies

The American Council on Education publishes national norms for students entering 2- and 4-year colleges (*22*). Comparison of the variables reported for all students with students entering the three types of nursing programs, either for one sample, 1967, or all samples combined, shows some differences between the total college student group and entrants to nursing programs.

Students in all three nursing programs were older and had reported higher high school academic standing than students in the national group upon which the norms were based (table A–15). There were proportionally more white students in the nursing programs than in the national group. The disparity between nursing students and the national group appears to be among those reporting "other" ethnic identification. Options in the checklist for racial background on the ACE 1967 Student Information Form were: Caucasian, Negro, American Indian, Oriental, and other. In table A–15 the last three categories have been combined. Options on the Nurse Career-Pattern Study questionnaire were: White, Negro, Oriental, and other, with a request to write in and specify the latter. Written responses include such ethnic designations as Puerto Rican, Spanish American, as well as American Indian, Polynesian, Hawaiian, Filipino. For Career-Pattern Study data in table A–15, "other" includes Oriental and all specific racial or ethnic identifications where the respondent chose this option rather than white or Negro.

There were proportionally fewer Jewish students entering baccalaureate nursing programs than other 4-year colleges, but more entering 2-year nursing programs than other 2-year college programs. Also, higher percentages of entrants in the national groups than nursing students professed no religious affiliation. Family income reported by nursing students was proportionally lower than family income reported by those entering 2- or 4-year colleges. There was some similarity in years of fathers' education for baccalaureate nursing students and students in 4-year colleges. Similar proportions of entrants to associate degree and diploma programs reported fathers with 12 years of education as entrants to 2-year programs.

It would appear that entrants to nursing programs, when compared to national norms for all entering students to 2- and 4-year colleges display dissimilarities in certain biographical characteristics.

In a Project Talent followup of high school students who were enrolled in 3-year (diploma) schools of nursing and 4-year baccalaureate nursing programs, Schoenfelt concluded that "Comparison of these two groups on the aptitude, achievement, interest, and temperament . . . showed them to be essentially the same. On the other hand, clear differences between the groups were found on biographical items concerned with family background and educational plans.

"The composite picture suggested . . . is that of two essentially different home environments. The girls who enrolled in college came from homes with a considerably higher socioeconomic level . . . and better educated parents. These girls considered a college degree necessary for their work. . . . The girls in the three-year nurse group tend to come from "working class" homes . . . they did not consider a college degree necessary. As compared with parents of the college girls, the parents of those in this group were not as well educated. . . ." (*23*).

Dustan studied student characteristics in four nursing programs in one city (one associate degree, two diploma, and one baccalaureate program) during the same time the Nurse Career-Pattern Study was being launched. She says: "When the social, economic, and educational backgrounds of the four student groups were viewed simultaneously, it was apparent that the associate degree program had attracted the oldest and most locally based group of students, many of whom were married and had family responsibilities. Three-fourths of them had enrolled in some type of post-high school educational institution before entering their present program, which made them the most educationally experienced of the four groups. In contrast, the two diploma schools had attracted the youngest student groups drawn from the widest geographic area. Most of the students had entered these two schools of nursing directly after leaving high school. The baccalaureate program had attracted students who formed the middle group between the two extremes (*24*)."

A study of freshman students in the three types of registered nurse programs in one State led the author to the conclusion that "the associate degree student has a higher average age . . . is married or was once married . . . her father and mother did not finish high school; she probably ranked in the upper half of her high school class, but may have ranked in the lower half . . . did not have college work before nursing school but might have been an LPN or have had some LPN training. . . ." The diploma student, he says, "entered nursing school right out of high school; is not married . . .

father and mother are high school graduates, college graduates or may have some college education . . . ranked in the upper half of her high school graduating class." The baccalaureate student, the author found, "is unmarried . . . father and mother are high school graduates and possibly are college graduates . . . and she ranked in the upper fourth of her high school graduating class. . . (25)."

These two geographically localized studies also indicate that the three registered nurse programs attract different groups and the biographical characteristics described do not appear to differ substantially from those described for the national sample in the Nurse Career-Pattern Study.

Plan of this Report

A short overview of the background and purposes of the Nurse Career-Pattern Study, reasons for choice of methodology, and plan of execution have been described. Biographical characteristics of the entering students with some comparisons from other studies are presented. Subsequent chapters are concerned with withdrawal before graduation, variables related to graduation/withdrawal, reason for withdrawal, and activities of those who withdrew after leaving nursing school.

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Chapter II

GRADUATION AND WITHDRAWAL

Presumably, those who enroll in nursing programs have intentions of becoming registered nurses. However, since 100 percent of those who enroll are not graduated, events intervene between the time of enrollment and the expected time of graduation which temporarily interrupt or permanently alter the intentions of some students. The underlying question is whether withdrawal before graduation is simply an inevitable fact of education life or a problem to be solved. Generally, withdrawal has been viewed as a problem for concern in both general and nursing education.

There is a difference of opinion among observers as to just who should be called a withdrawal. Are the students who leave temporarily and return at a future date included? Are students who transfer to other schools withdrawals? If students change their majors, are they withdrawals from one area and admissions to another? These questions have been circumvented by defining the exact meaning of withdrawal for a specific study.

In studies reviewed for this report, there was a difference in terminology, often without definition; for example, terms used were withdrawal, attrition, and dropout rates and graduation, persistence, and retention rates. For the NCPS, "graduated" or "withdrew" are the terms used, but the assumption is made that attrition rates and dropout rates are comparable to withdrawal rates; and retention and persistence rates are comparable to graduation rates.

Sometimes schools are reluctant to publish attrition rates because they believe these may strengthen an impression that withdrawal is considered a problem. The question can then be asked: Is there an acceptable rate of withdrawal? What is this rate? When does this rate change from being acceptable to being a problem? When a problem concerning withdrawal before graduation is discerned, where and how are solutions derived?

Withdrawal before completion is not a phenomenon peculiar to nursing schools. In fact, in comparison with other post-high school education, nursing may be on the plus side in retaining its students.

Withdrawal Rates in Nonnursing

Shelves have been filled with studies and reports concerning attrition among college students. The subject has been approached from various and multiple disciplines. Psychological, sociological, biological, demographic, institutional, and financial factors have been explored. Yet, in a review of 35 different studies Summerskill concluded "... American colleges lose, on the average, approximately half of their students in the four years after matriculation. Some 40 percent of college students graduate on schedule and in addition approximately 20 percent graduate at some college someday. These have been the facts for several decades in American higher education (*1*)." Although this was published in the early sixties, later national data do not appear to differ greatly. Astin found, with the class of 1970 in 4-year colleges, that 47 percent had received a degree within four years, and by a broader definition of retention, "received a degree or was still enrolled," found about 59 percent included (*2*). Also, in studying stability of career choice among college students, Astin and Panos report "... the student's choice of a career at the time he enters college typically changes by the time of graduation. Only two of the careers, nurse and schoolteacher, managed to hold as many as half the students initially choosing them (*3*)."

Withdrawal rates for 2-year colleges appear to be even higher than for 4-year schools. Astin found that 38 percent of students in 2-year colleges received a degree within 2 years and about 41 percent had either received an associate degree or were still enrolled after 2 years (*4*).

A study of junior colleges in one area estimated an attrition rate of about 52 percent between the first and second years (*5*).

Withdrawal Rates in Schools of Nursing

During the years diploma programs were predominant, it was generally assumed that about one-third of all student nurses withdrew before graduation. This assumption was based, for the most part, on careful documentation by Taylor of withdrawal and reason for withdrawal by each year in the diploma program (*6*). When there were only two types of nursing programs, and very few baccalaureate at that, proportions reported usually reflected both programs combined (*7*).

Attrition rates of 42 and 44 percent for baccalaureate programs and 31 and 33 percent for diploma programs were reported by Tate for classes graduating in the late fifties (*8*). Rottkamp reported that the average attrition rate in baccalaureate programs from 1954–55 through 1961–62 was 41 percent (*9*).

Rowe and Flitter reported attrition rates of 42 and 43 percent for classes of 1964 and 1965 in associate degree programs in nursing, while Montag noted a withdrawal rate averaging 41 percent for the years 1960 through 1964 (*10, 11*). If rates for all types of nursing programs for the years 1960 through 1964 are combined, there is a range of 29 percent to 34 percent of students who withdrew before graduation according to the American Nurses' Association (*12*). Data for the studies mentioned—Tate, Rottkamp, Rowe and ANA—are derived from the annual survey of nursing schools conducted by the National League for Nursing.

A summary of studies related to attrition prior to 1966 indicated that "... four published and ten unpublished studies each giving the drop-out rate for one or two schools, showed that the attrition rate ranged from 24 percent to 56 percent with the average being 39 percent (*13*)."

There have been geographically localized, single school, or single program studies of attrition rates (*14, 15*). Other studies related cognitive ability, psychological responses, personality factors, and combinations of these variables to eventual graduation of nursing students (*16, 17, 18, 19, 20*). Generally, these studies were done in a small number of schools or with one type of basic nursing student.

It is not the intention in citing these studies to provide a complete guide to studies of either nonnursing or nursing students as related to graduation and withdrawal, but simply to indicate that much investigation has been done and is available.

However, in none of the available material was there a national study comprising nursing students in all three types of registered nurse programs which studied the same cohorts in relation to graduation and withdrawal.

Graduation/Withdrawal Rates in the Nurse Career-Pattern Study

"Graduated" in the NCPS means that participants completed the same type of nursing program in which they were enrolled at the beginning of the study, either in the stipulated time or within 1 year after the expected date of graduation.

"Withdrawal" from nursing school in this study means that the participants completely ceased their association with nursing or transferred to a different type of basic nursing program or transferred to a nursing program of unknown type.

After the initial questionnaires were gathered from entering students, a list of participants in each school in the study was prepared. This list was then sent to the director of the nursing program for verification and spelling of names and designation of address, sex, and marital status if the information was missing.

After the director had checked the list, it was assumed that these were indeed the entering students. Shortly before the date stipulated at the beginning of the study as the probable date of graduation, the same list was sent back to the director asking her to: confirm the date of graduation (so that the second questionnaire for those graduating could be sent on time to the school), indicate those who had withdrawn, and place next to the name of each student who had withdrawn the appropriate reason from a checklist of reasons for withdrawal.

If students had transferred to another nursing school the director was asked to name the school to which students had transferred or, if unknown to her, the school to which transcripts had been sent. If the director did not know the name of the school, the participant was contacted directly.

Table 1 gives rates of graduation and withdrawal for Career-Pattern Study participants by year of entrance and type of program and for all years combined. The graduation rate among associate degree students ranged from 58.5 percent for the 1962 group to 62.4 percent for the 1967 group with a total of 60.6 percent for all 3 years combined. The range for diploma students was between 67.6 percent for 1962 to 72.5 percent for 1967 with 69.7 percent for all years. In baccalaureate programs 50.5 percent in the 1962 group were graduated, in the 1967 group, 58.2 percent; the overall percentage was 53.6 percent.

Table 1.—Rates of graduation and withdrawal, by program and year of entrance

Completion status	Year of entrance						Total	
	1962		1965		1967			
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
				Associate degree				
Graduated	1,336	58.5	3,285	59.4	3,772	62.4	8,393	60.6
Withdrew	947	41.5	2,242	40.6	2,270	37.6	5,459	39.4
Total	2,283	100.0	5,527	100.0	6,042	100.0	13,852	100.0
				Diploma				
Graduated	3,689	67.6	3,978	69.6	3,113	72.5	10,780	69.7
Withdrew	1,767	32.4	1,741	30.4	1,180	27.5	4,688	30.3
Total	5,456	100.0	5,719	100.0	4,293	100.0	15,468	100.0
				Baccalaureate				
Graduated	1,868	50.5	2,612	51.7	2,712	58.2	7,192	53.6
Withdrew	1,832	49.5	2,439	48.3	1,947	41.8	6,218	46.4
Total	3,700	100.0	5,051	100.0	4,659	100.0	13,410	100.0

These data indicate that graduation rates in this study differed among the three types of nursing programs. For all three programs, however, the rate of graduation increased during the years of participation in the Career-Pattern Study.

Summary

This chapter is a short overview of the various definitions used to enumerate graduates and withdrawals. In the Nurse Career-Pattern Study graduation means completion of a nursing program of the same type in which participants were enrolled when starting with the study. Withdrawal refers to all who ceased their association with nursing completely or who transferred into a different type of nursing program.

Rates of graduation/withdrawal among nonnursing and nursing students are presented. Graduation rates among nursing students appear to be higher than rates reported for national samples of 2- and 4-year colleges.

Proportions graduating differ among the three registered nurse programs. The diploma program has the highest proportion graduating, followed by the associate degree and baccalaureate programs. The proportion of Nurse Career-Pattern Study participants graduating each of the three programs increased during the years covered by the study. However, the overall proportion withdrawing from any one type of program does not appear to be very different from attrition rates reported in other studies of nursing students.

At the time this information was gathered, an unanticipated problem was encountered. In many schools there were students who would be graduated from the same type of program or same school but not at the same time as the class with which they entered nursing school. For these participants, individual records were kept and students were retained in the study continuing with the second questionnaire which was gathered at the time of each graduation. To keep order in the data collection and processing, an arbitrary cut-off point was set as 1 year after the original date of graduation.

In addition, each student who withdrew received a questionnaire. These were read as soon as possible after being received. If the participants indicated they had reenrolled in a nursing program of the same type from which they had withdrawn, every attempt was made to include them among the graduates. They were then sent the questionnaire meant for graduates at the probable time of graduation. If these questionnaires were returned and indicated the participants had completed the program, they were considered graduates and retained in subsequent years of the study. If participants did not respond to inquiries or did not return the questionnaire meant for graduates, they were considered withdrawals. In

this manner, each individual who started with the study was assigned a designation: graduated or withdrawn.

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Chapter III

VARIABLES RELATED TO GRADUATION/ WITHDRAWAL

A knowledge of graduation and withdrawal rates can be useful, but they are more meaningful when specific variables are known to contribute to them. Are certain personal characteristics of nursing students related to whether or not they complete a program? Do family background characteristics affect students' graduation or withdrawal from nursing schools? Will students' previous educational experiences influence their subsequent graduation or withdrawal from nursing school?

To gain an understanding of the possible answers to such questions, almost all variables from the initial questionnaire completed at the time NCPS students entered nursing school were cross-tabulated with students' statuses as graduated or withdrew. Examination of biographical characteristics for each group, those entering in 1962, 1965, and 1967 by type of program, reveals no gross differences within nursing programs (*1*). Therefore, for purposes of this report, data on respondents for all 3 years have been combined. All participants have been included and the data analyzed by cross-tabulation of specific variables by graduation or withdrawal. Not all available variables are reported: those selected for tabular presentation are possibilities for deeper study.

This chapter presents cross-tabulation tables for characteristics of study participants as divided by graduated or withdrew. Personal characteristics—sex, marital status at entrance, age at entrance, ethnic group, religious preference, family income, and comparison of birthplace and location of high school from which they were graduated—are described. Certain variables describing parents are included in the graduated/withdrew analysis: father's occupation, father's social index, mother's occupation, parents' education. Three characteristics of participants' education prior to nursing school are also described by graduated/withdrew: high school academic standing, geographic location of high school, and previous attendance in a nursing education program. Finally, separate tabulations are presented for high school academic standing by graduated/withdrew, marital status, and ethnic group.

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[1] For derivation of Social Index see chapter I.

Statistics are reported for variables describing personal characteristics, parents' characteristics, and those related to prior education when the chi square probability was less than .001. In many cases, the tables compare a predominant group with a much smaller group: for example, single versus married and formerly married in the diploma and baccalaureate samples. The very unequal numbers plus the large total number need to be kept in mind when examining these statistical results. The corrected contingency coefficient is also reported when chi square had a probability of less than .001. In addition to reporting a chi square level, it is desirable to indicate the strength or degree of relationship between variables.

Unfortunately, most tests of association make assumptions which are not applicable to the data in this study. The majority of variables dealt with are categorical and nominal, rather than continuous. One measure, however, readily derived from the chi square, which gives some indication of degree of relationship, is the contingency coefficient ($\mathcal{C}$). When variables are independent and unrelated the contingency coefficient is zero. The upper limits are a function of the number of rows and columns in the table and cannot reach 1.0 as with parametric correlations. A correction can be built into the formula which would produce a 1.0 coefficient if the data in the tables were distributed in diagonal cells. The corrected contingency coefficient (cc) appears in the appropriate tables as a decimal. Higher numeric values imply a stronger relationship than lower numeric values. Most of the corrected contingency coefficients in the following tables do not reach a very high numeric value; nevertheless, they are helpful in contributing to a summary of the magnitude of differences between distributions in the tables. The statistical results do not explain the amount of variance in the observed relationships, nor do they explain the direction of the relationship in terms of positive or negative.

The tables do, however, supply a descriptive background of a national sample from the three types of programs, which can be used to assess the entire phenomenon of graduated/withdrew. All of the tables give results by type of nursing program: associate degree, diploma, and baccalaureate.

Personal Characteristics

When graduated/withdrew is viewed by sex, the proportions of men and women among associate degree respondents differed very little (table 2). There were differences among the diploma and baccalaureate, with proportionally fewer men graduating than women, but only among the diploma respondents did the degree of difference reach the level of significance set in this study. However, the total number of men in the diploma and baccalaureate programs was not great.

Table 2.—Graduated/withdrew, by sex and type of program: all years combined [1]

Status	Sex					
	Women		Men		Total	
	No.	Pct.	No.	Pct.	No.	Pct.
			Associate degree			
Graduated	8,051	60.7	342	59.2	8,393	60.6
Withdrew	5,223	39.3	236	40.8	5,459	39.4
Total	13,274	100.0	578	100.0	13,852	100.0
			Diploma			
Graduated	10,664	69.8	116	58.0	10,780	69.7
Withdrew	4,604	30.2	84	42.0	4,688	30.3
Total	15,268	100.0	200	100.0	15,468	100.0
$\chi^2 = 13.11$, df = 1, p less than .001, cc .041.						
			Baccalaureate			
Graduated	7,152	53.7	40	40.4	7,192	53.6
Withdrew	6,159	46.3	59	59.6	6,218	46.4
Total	13,311	100.0	99	100.0	13,410	100.0

[1] 1962, 1965 and 1967 groups.

Marital status and its relationship to graduation or withdrawal is described in table 3. Among associate degree participants, 71.8 percent of the married students were graduated and 64.4 percent of formerly married (widowed, separated and divorced), both higher than the proportion, 56.4 percent, of graduated single students.

Although there are descriptive differences in graduation/withdrawal and marital status for diploma students, these were not statistically related. Among diploma participants, 73.1 percent of the small group of formerly married students were graduated, as were 69.8 percent of the single students and 64.4 percent of the married students. There are very unequal groups among the baccalaureate participants, but among these students the highest rate of graduation was among those who were single, 53.8 percent, followed by the married, 49.4 percent, and then the formerly married, 32.9 percent.

Since marital status and age are related in the general population, it is reasonable to assume they are related in the Nurse Career-Pattern Study groups. The findings in table 4, graduated/withdrew by age at entrance, are similar to those in table 3. The associate degree students who were over 30 years of age when they entered a nursing program had a higher graduation rate, 72.1 percent, than any of their younger cohorts. In fact, the lower the age group among associate degree participants, the lower the rate of graduation.

Table 3.—Graduated/withdrew, by marital status at entrance and type of program: all years combined [1]

Status	Marital status at entrance							
	Single		Married		Formerly married		Total	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Associate degree								
Graduated	5,532	56.4	2,341	71.8	440	64.4	8,313	60.5
Withdrew	4,270	43.6	919	28.2	243	35.6	5,432	39.5
Total	9,802	100.0	3,260	100.0	683	100.0	13,745	100.0
$\chi^2 = 246.53$, df = 2, p less than .001, cc .173.								
Diploma								
Graduated	10,458	69.8	197	64.4	57	73.1	10,712	69.7
Withdrew	4,535	30.2	109	35.6	21	26.9	4,665	30.3
Total	14,993	100.0	306	100.0	78	100.0	15,377	100.0
Baccalaureate								
Graduated	6,979	53.8	120	49.4	27	32.9	7,126	53.6
Withdrew	5,998	46.2	123	50.6	55	67.1	6,176	46.4
Total	12,977	100.0	243	100.0	82	100.0	13,302	100.0
$\chi^2 = 15.99$, df = 2, p less than .001, cc .045.								

[1] Excludes religious Brother and Sister, and unknown marital status.

The opposite is true of the baccalaureate participants. The older the students the less likely they were to be graduated: 41.6 percent for those over 30. Of those 19 and under, the youngest group, usually thought of as college freshmen, 53.1 percent were graduated. The highest proportion of those graduating, 60.6 percent, were from the group 20 to 24 years old.

The proportion of diploma participants graduating in each of the four age groups did not differ greatly from the proportion graduating for the entire group.

Findings for graduated/withdrew by ethnic group were similar for all three programs (table 5). White students had the highest graduation rates. Among the associate degree and diploma participants, those in the category "other" had the lowest proportions graduating: 49.8 percent and 56.5 percent respectively. For the baccalaureate group, black students had the lowest proportion graduating, 28.6 percent, considerably less than the group as a whole, 53.6 percent.

Designated religious preference was related statistically to graduated/withdrew in two of the groups, diploma and baccalaureate, but for all three groups the pattern was the same (table 6). Roman Catholic students were graduated in higher proportions than those of other Christian religions or the Jewish faith. The lowest propor-

Table 4.—Graduated/withdrew, by age at entrance and type of program: all years combined[1]

Status	Age at entrance									
	19 and under		20–24		25–29		30 and over		Total	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Associate degree										
Graduated	4,223	54.1	1,605	67.5	616	70.6	1,731	72.1	8,175	6
Withdrew	3,581	45.9	772	32.5	257	29.4	670	27.9	5,280	3
Total	7,804	100.0	2,377	100.0	873	100.0	2,401	100.0	13,455	10
χ^2 = 354.74, df = 3, p less than .001, cc .199.										
Diploma										
Graduated	9,560	69.7	669	70.1	97	72.4	103	64.8	10,429	6
Withdrew	4,148	30.3	285	29.9	37	27.6	56	35.2	4,526	3
Total	13,708	100.0	954	100.0	134	100.0	159	100.0	14,955	10
Baccalaureate										
Graduated	6,162	53.1	724	60.6	37	49.3	52	41.6	6,975	5
Withdrew	5,434	46.9	470	39.4	38	50.7	73	58.4	6,015	4
Total	11,596	100.0	1,194	100.0	75	100.0	125	100.0	12,990	10
χ^2 = 32.51, df = 3, p less than .001, cc .062.										

[1] Excludes ambiguous and no response to age.

Table 4.—Graduated/withdrew, by age at entrance and type of program: all years combined [1]

Status	Age at entrance									
	19 and under		20–24		25–29		30 and over		Total	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
					Associate degree					
----------	4,223	54.1	1,605	67.5	616	70.6	1,731	72.1	8,175	60.8
----------	3,581	45.9	772	32.5	257	29.4	670	27.9	5,280	39.2
----------	7,804	100.0	2,377	100.0	873	100.0	2,401	100.0	13,455	100.0
3, p less than .001, cc .199.										
					Diploma					
----------	9,560	69.7	669	70.1	97	72.4	103	64.8	10,429	69.7
----------	4,148	30.3	285	29.9	37	27.6	56	35.2	4,526	30.3
----------	13,708	100.0	954	100.0	134	100.0	159	100.0	14,955	100.0
					Baccalaureate					
----------	6,162	53.1	724	60.6	37	49.3	52	41.6	6,975	53.7
----------	5,434	46.9	470	39.4	38	50.7	73	58.4	6,015	46.3
----------	11,596	100.0	1,194	100.0	75	100.0	125	100.0	12,990	100.0
p less than .001, cc .062.										

nd no response to age.

Table 5.—Graduated/withdrew, by ethnic group and type of program: all years combined [1]

Status	Ethnic group							
	White		Black		Other		Total	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
				Associate degree				
Graduated	7,734	61.7	500	50.7	138	49.8	8,372	60.6
Withdrew	4,810	38.3	487	49.3	139	50.2	5,436	39.4
Total	12,544	100.0	987	100.0	277	100.0	13,808	100.0
$\chi^2 = 60.19$, df = 2, p less than .001, cc .086.								
				Diploma				
Graduated	10,406	70.1	268	60.6	87	56.5	10,761	69.7
Withdrew	4,438	29.9	174	39.4	67	43.5	4,679	30.3
Total	14,844	100.0	442	100.0	154	100.0	15,440	100.0
$\chi^2 = 31.05$, df = 2, p less than .001, cc. 058.								
				Baccalaureate				
Graduated	6,902	55.1	208	28.6	72	49.7	7,182	53.6
Withdrew	5,613	44.9	520	71.4	73	50.3	6,206	46.4
Total	12,515	100.0	728	100.0	145	100.0	13,388	100.0
$\chi = 196.37$, df = 2, p less than .001, cc .156.								

[1] Excludes ambiguous and no response to ethnic group.

tions graduating were among those who had no religious preference: 57.9 percent associate degree, 59.8 percent diploma, and 38.1 percent baccalaureate.

Distributions for graduated/withdrew by family income are given in table 7. Among the associate degree and baccalaureate participants, those in the lowest income group had the lowest proportions graduating: 56.2 percent associate degree and 48 percent baccalaureate. The highest income group among diploma participants—the fewest participants—had the lowest rate of graduation, 66.5 percent, followed by those at the opposite end of the income scale where 67.5 percent were graduated as compared with 69.9 percent for the entire group. The highest proportion of graduating associate degree and diploma students was in the $5,000–9,999 group, 62.7 percent and 71.6 percent respectively. Among baccalaureate students, the highest proportion graduating was in the $10,000–14,999 group, 57.1 percent, as compared with 54 percent for the entire group.

The actual amounts reported in table 7 need to be considered in relation to the economy, since data in this table reflect three different years. Nationally, income levels rose between 1962 and 1967 (*3*). Family incomes reported by study participants showed

Table 6.—Graduated/withdrew, by religious preference and type of program: all years combined [1]

Status	Religious preference								Tota
	Roman Catholic		Christian (Not R.C.)		Jewish		None		
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.
					Associate degree				
Graduated	2,668	62.0	5,162	60.1	264	61.5	157	57.9	8,251
Withdrew	1,637	38.0	3,431	39.9	165	38.5	114	42.1	5,347
Total	4,305	100.0	8,593	100.0	429	100.0	271	100.0	13,598
					Diploma				
Graduated	4,588	73.9	5,932	66.9	87	67.4	55	59.8	10,662
Withdrew	1,621	26.1	2,931	33.1	42	32.6	37	40.2	4,631
Total	6,209	100.0	8,863	100.0	129	100.0	92	100.0	15,293
$\chi^2 = 88.50$, df = 3, p less than .001, cc .094.									
					Baccalaureate				
Graduated	2,460	58.4	4,465	51.8	145	50.2	61	38.1	7,131
Withdrew	1,751	41.6	4,154	48.2	144	49.8	99	61.9	6,148
Total	4,211	100.0	8,619	100.0	289	100.0	160	100.0	13,279
$\chi^2 = 67.22$, df = 3, p less than .001, cc .088.									

[1] Excludes other religion, ambiguous, and no response to religion.

Table 6.—Graduated/withdrew, by religious preference and type of program: all years combined [1]

Status	Religious preference								Total	
	Roman Catholic		Christian (Not R.C.)		Jewish		None			
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
					Associate degree					
ed	2,668	62.0	5,162	60.1	264	61.5	157	57.9	8,251	60.7
w	1,637	38.0	3,431	39.9	165	38.5	114	42.1	5,347	39.3
	4,305	100.0	8,593	100.0	429	100.0	271	100.0	13,598	100.0
					Diploma					
ed	4,588	73.9	5,932	66.9	87	67.4	55	59.8	10,662	69.7
w	1,621	26.1	2,931	33.1	42	32.6	37	40.2	4,631	30.3
	6,209	100.0	8,863	100.0	129	100.0	92	100.0	15,293	100.0
.50, df = 3, p less than .001, cc .094.										
					Baccalaureate					
ed	2,460	58.4	4,465	51.8	145	50.2	61	38.1	7,131	53.7
w	1,751	41.8	4,154	48.2	144	49.8	99	61.9	6,148	46.3
	4,211	100.0	8,619	100.0	289	100.0	160	100.0	13,279	100.0
7.22, df = 3, p less than .001, cc .088.										

ee other religion, ambiguous, and no response to religion.

Table 7.—Graduated/withdrew, by family income at entrance and type of program: all years combined [1]

Status	Family income at entrance									
	Below 5,000		5,000–9,999		10,000–14,999		15,000 and over		Total	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Associate degree										
Graduated	1,577	56.2	3,709	62.7	1,796	62.4	661	61.0	7,743	61.
Withdrew	1,227	43.8	2,211	37.3	1,082	37.6	422	39.0	4,942	39.
Total	2,804	100.0	5,920	100.0	2,878	100.0	1,083	100.0	12,685	100.
$\chi^2 = 35.87$, df = 3, p less than .001, cc .066.										
Diploma										
Graduated	2,305	67.5	5,028	71.6	1,920	69.5	560	66.5	9,813	69.
Withdrew	1,110	32.5	1,994	28.4	844	30.5	282	33.5	4,230	30.
Total	3,415	100.0	7,022	100.0	2,764	100.0	842	100.0	14,043	100.
$\chi^2 = 23.90$, df = 3, p less than .001, cc .051.										
Baccalaureate										
Graduated	934	48.0	2,577	53.2	1,934	57.1	1,030	56.6	6,475	54.
Withdrew	1,013	52.0	2,267	46.8	1,456	42.9	789	43.4	5,525	46.
Total	1,947	100.0	4,844	100.0	3,390	100.0	1,819	100.0	12,000	100.
$\chi^2 = 47.46$, df = 3, p less than .001, cc .078.										

[1] Data gathered 1982, 1985, 1987. Excludes ambiguous and no response to income.

Table 7.—Graduated/withdrew, by family income at entrance and type of program: all years combined [1]

Status	Family income at entrance									
	Below 5,000		5,000–9,999		10,000–14,999		15,000 and over		Total	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Associate degree										
duated	1,577	56.2	3,709	62.7	1,796	62.4	661	61.0	7,743	61.0
ndrew	1,227	43.8	2,211	37.3	1,082	37.6	422	39.0	4,942	39.0
otal	2,804	100.0	5,920	100.0	2,878	100.0	1,083	100.0	12,685	100.0
= 35.87, df = 3, p less than .001, cc .066.										
Diploma										
duated	2,305	67.5	5,028	71.6	1,920	69.5	560	66.5	9,813	69.9
ndrew	1,110	32.5	1,994	28.4	844	30.5	282	33.5	4,230	30.1
otal	3,415	100.0	7,022	100.0	2,764	100.0	842	100.0	14,043	100.0
= 23.90, df = 3, p less than .001, cc .051.										
Baccalaureate										
duated	934	48.0	2,577	53.2	1,934	57.1	1,030	56.6	6,475	54.0
ndrew	1,013	52.0	2,267	46.8	1,456	42.9	789	43.4	5,525	46.0
otal	1,947	100.0	4,844	100.0	3,390	100.0	1,819	100.0	12,000	100.0
= 47.46, df = 3, p less than .001, cc .078.										

Data gathered 1962, 1965, 1967. Excludes ambiguous and no response to income.

smaller proportions in the lowest income bracket and higher proportions in the categories above $10,000 for the 1967 group as compared with the 1962 group (4). Therefore, three supplementary tables are included in appendix A (tables A–16, A–17, and A–18). These describe graduated/withdrew by family income and type of program for each specific year of the study. In general, the pattern is the same as that in table 7.

Those in the lowest income bracket among the associate degree group were graduated in smaller proportions than those in other groups in both 1965 and 1967. But, with the 1962 group, it was those reporting family incomes of $10,000 to $14,999 who were graduated least frequently, 56.5 percent.

In all three groups of diploma participants, those at the highest income level used in this study had the lowest proportion graduating, with a range of 65.1 percent for the 1965 group to 68.5 percent for the 1967 group. Baccalaureate participants with family incomes at the lowest level, below $5,000, were graduated as follows: 49.3 percent of the 1962 group, 46.7 percent of the 1965 group, and 47.9 percent of the 1967 group. These were the lowest proportions of graduated participants among all the income groups, although in the 1962 baccalaureate group, the two lowest income groups had graduations in the same proportions.

On the questionnaire completed at entrance, participants reported their places of birth and States in which they had attended high school. These two responses were compared and the comparison coded with the designations given in table 8. Students whose birthplace and high school were in the same State had graduation rates in all three programs higher than rates of those in any other category: associate degree, 61.3 percent; diploma, 70.7 percent; and baccalaureate 55.9 percent. The lowest proportion of associate degree participants graduating, 58.3 percent, was among the group whose birthplaces or high schools or both had been outside the United States. Diploma and baccalaureate participants who had moved from one region to another between the time they were born and the time they went to high school had the lowest graduation rates: diploma, 64.5 percent, and baccalaureate 46.7 percent. The regions in this study are based on categories in general use at the National League for Nursing and, roughly, can be designated as Northeast, Midwest, South, and West. The States which comprise each region are specified in the footnote to table 8.

Parents' Characteristics

Four variables related to parents elicited from the first questionnaire are included in the graduated/withdrew analysis: fathers' occupations, fathers' social index, mothers' occupations and parents'

Table 8.—Graduated/withdrew, by comparison of location of place of birth and place of high school graduation, and by type of program: years combined [1]

Status	Comparison of location: Both same U.S. State No.	Pct.	Different State same region [2] No.	Pct.	Different State and region [2] No.	Pct.	One or both outside U.S. No.	Pct.	Total No.	Pct.
					Associate degree					
Graduated	5,700	61.3	495	60.0	1,603	58.9	384	58.3	8,182	6
Withdrew	3,602	38.7	330	40.0	1,119	41.1	275	41.7	5,326	3
Total	9,302	100.0	825	100.0	2,722	100.0	659	100.0	13,508	10
					Diploma					
Graduated	8,494	70.7	588	66.9	1,159	64.5	437	70.0	10,678	6
Withdrew	3,515	29.3	291	33.1	637	35.5	187	30.0	4,630	3
Total	12,009	100.0	879	100.0	1,796	100.0	624	100.0	15,308	10
$\chi^2 = 32.06$, df = 3, p less than .001, cc .057.										
					Baccalaureate					
Graduated	5,123	55.9	522	53.6	1,239	46.7	252	49.6	7,136	5
Withdrew	4,040	44.1	452	46.4	1,412	53.3	256	50.4	6,160	4
Total	9,163	100.0	974	100.0	2,651	100.0	508	100.0	13,296	10
$\chi^2 = 73.10$, df = 3, p less than .001, cc .092.										

[1] Excludes ambiguous and no response to place of birth and place of high school.

[2] NLN Regions are:

I (North Atlantic)	Connecticut, Delaware, District of Columbia, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont
II (Midwest)	Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin
III (Southern)	Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, Puerto Rico, South Carolina, Tennessee, Texas, Virginia, West Virginia
IV (Western)	Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming

le 8.—Graduated/withdrew, by comparison of location of place of birth and place of high school graduation, and by type of program: all years combined [1]

Status	Comparison of location: Both same U.S. State No.	Pct.	Different State same region [2] No.	Pct.	Different State and region [2] No.	Pct.	One or both outside U.S. No.	Pct.	Total No.	Pct.
					Associate degree					
duated	5,700	61.3	495	60.0	1,603	58.9	384	58.3	8,182	60.6
drew	3,602	38.7	330	40.0	1,119	41.1	275	41.7	5,326	39.4
tal	9,302	100.0	825	100.0	2,722	100.0	659	100.0	13,508	100.0
					Diploma					
uated	8,494	70.7	588	66.9	1,159	64.5	437	70.0	10,678	69.8
drew	3,515	29.3	291	33.1	637	35.5	187	30.0	4,630	30.2
tal	12,009	100.0	879	100.0	1,796	100.0	624	100.0	15,308	100.0
32.06, df = 3, p less than .001, cc .057..										
					Baccalaureate					
uated	5,123	55.9	522	53.6	1,239	46.7	252	49.6	7,136	53.7
drew	4,040	44.1	452	46.4	1,412	53.3	256	50.4	6,160	46.3
tal	9,163	100.0	974	100.0	2,651	100.0	508	100.0	13,296	100.0
73.10, df = 3, p less than .001, cc .092.										

cludes ambiguous and no response to place of birth and place of high school.
N Regions are:

h Atlantic) Connecticut, Delaware, District of Columbia, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont

west) Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin

uthern) Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, Puerto Rico, South Carolina, Tennessee, Texas, Virginia, West Virginia

stern) Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming

Table 9.—Graduated/withdrew, by father's occupation and type of program: all years combined [1]

Status	Father's occupation															
	MD and other health		Professional owner, service		Sales, clerical		Farmer and outdoor		Skilled		Semiskilled and unskilled		Military		Total	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Associate degree																
Graduated	296	62.4	1,886	59.7	1,209	59.9	726	64.5	1,904	61.3	840	57.8	133	56.1	6,994	6
Withdrew	178	37.6	1,275	40.3	810	40.1	399	35.5	1,204	38.7	614	42.2	104	43.9	4,584	3
Total	474	100.0	3,161	100.0	2,019	100.0	1,125	100.0	3,108	100.0	1,454	100.0	237	100.0	11,578	10
Diploma																
Graduated	319	72.2	2,294	68.3	1,837	70.8	974	72.7	2,839	71.2	1,410	69.6	153	60.0	9,826	7
Withdrew	123	27.8	1,066	31.7	757	29.2	366	27.3	1,148	28.8	617	30.4	102	40.0	4,179	2
Total	442	100.0	3,360	100.0	2,594	100.0	1,340	100.0	3,987	100.0	2,027	100.0	255	100.0	14,005	10
$\chi^2 = 26.19$, df = 6, p less than .001, cc .05.																
Baccalaureate																
Graduated	529	60.6	2,529	56.9	1,231	55.1	605	61.0	1,180	50.7	422	45.4	177	40.9	6,673	5
Withdrew	344	39.4	1,915	43.1	1,003	44.9	386	39.0	1,146	49.3	508	54.6	256	59.1	5,558	4
Total	873	100.0	4,444	100.0	2,234	100.0	991	100.0	2,326	100.0	930	100.0	433	100.0	12,231	10
$\chi^2 = 117.90$, df = 6, p less than .001, cc .114.																

[1] Excludes ambiguous, unidentified and no response to father's occupation.

Table 9.—Graduated/withdrew, by father's occupation and type of program: all years combined [1]

Status	Father's occupation														Total	
	MD and other health		Professional owner, service		Sales, clerical		Farmer and outdoor		Skilled		Semiskilled and unskilled		Military			
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No	Pct.
Associate degree																
duated ----	296	62.4	1,886	59.7	1,209	59.9	726	64.5	1,904	61.3	840	57.8	133	56.1	6,994	60.4
hdrew ------	178	37.6	1,275	40.3	810	40.1	399	35.5	1,204	38.7	614	42.2	104	43.9	4,584	39.6
Total -------	474	100.0	3,161	100.0	2,019	100.0	1,125	100.0	3,108	100.0	1,454	100.0	237	100.0	11,578	100.0
Diploma																
duated ----	319	72.2	2,294	68.3	1,837	70.8	974	72.7	2,839	71.2	1,410	69.6	153	60.0	9,826	70.2
hdrew ------	123	27.8	1,066	31.7	757	29.2	366	27.3	1,148	28.8	617	30.4	102	40.0	4,179	29.8
Total -------	442	100.0	3,360	100.0	2,594	100.0	1,340	100.0	3,987	100.0	2,027	100.0	255	100.0	14,005	100.0
= 26.19, df = 6, p less than .001, cc .05.																
Baccalaureate																
duated ----	529	60.6	2,529	56.9	1,231	55.1	605	61.0	1,180	50.7	422	45.4	177	40.9	6,673	54.6
hdrew ------	344	39.4	1,915	43.1	1,003	44.9	386	39.0	1,146	49.3	508	54.6	256	59.1	5,558	45.4
Total -------	873	100.0	4,444	100.0	2,234	100.0	991	100.0	2,326	100.0	930	100.0	433	100.0	12,231	100.0
= 117.90, df = 6, p less than .001, cc .114.																

Excludes ambiguous, unidentified and no response to father's occupation.

education. Although proportions and level of significance differ among the groups when graduated/withdrew is described by fathers' occupations (5), the pattern in all three groups is strikingly similar. Participants whose fathers were farmers or other outdoor workers, which included ranchers, agricultural specialists of many varieties, foresters, horticulturists, fishermen, and such related occupations, had the highest proportions graduating: 64.5 percent associate degree, 72.7 percent diploma, and 61.0 percent baccalaureate (table 9). Participants who came from families where the father was a physician or in a health occupation had the second highest rate of graduation: 62.4 percent associate degree, 72.2 percent diploma, and 60.6 percent baccalaureate. The lowest proportions graduating were found among those whose fathers were in military sevice as officers or enlisted men: 56.1 percent associate degree, 60.0 percent diploma, and 40.9 percent baccalaureate participants were graduated.

Most of the participants' fathers in this study were at social index position four (see appendix A, table A–9).[1] The social index assigned to the fathers was not statistically related to graduated/withdrew for the associate degree or diploma groups. The highest proportions graduating were those whose fathers were at social index four, 61.1 percent and 71.1 percent, which are similar to proportions graduating, 60.0 percent and 70.3 percent, for the entire group (table 10). Only among the baccalaureate participants is there a definite pattern, with the highest proportion graduating among those whose fathers were assigned social index one, 58.6 percent. Proportions graduating were progressively lower for each succeeding social index classification, with the smallest proportion graduating, 46.0 percent, from among those whose fathers were classified as being at social index position five.

For purposes of this analysis, mothers' occupations were categorized as registered nurse or practical nurse, all other occupations, and housewife (table 11). Although the findings for associate degree and diploma participants were not statistically significant, those whose mothers were in nursing were graduated in slightly higher proportions than those whose mothers were in nonnursing occupations: 61.0 percent of the associate degree participants whose mothers were registered nurses or practical nurses were graduated as compared to 58.9 percent of those whose mothers were in other occupations. For those diploma participants whose mothers were nurses, 72.2 percent were graduated, while 68.0 percent of those whose mothers were in other occupations completed the program. Among baccalaureate participants, the pattern was the same, but the difference was somewhat greater: 59.4 percent of those whose

[1] For derivation of Social Index see chapter I.

Table 10.—Graduated/withdrew, by father's social index and type of program: all years combined [1]

Status	Father's social index: One No.	Pct.	Two No.	Pct.	Three No.	Pct.	Four No.	Pct.	Five No.	Pct.	Total No.	Pct.
Associate degree												
Graduated	366	59.8	874	59.4	1,289	59.4	2,999	61.1	753	57.6	6,281	60.
Withdrew	246	40.2	597	40.6	880	40.6	1,909	38.9	554	42.4	4,186	40.
Total	612	100.0	1,471	100.0	2,169	100.0	4,908	100.0	1,307	100.0	10,467	100.
Diploma												
Graduated	360	68.1	1,007	68.4	2,253	70.0	4,623	71.1	1,193	69.6	9,436	70.
Withdrew	169	31.9	465	31.6	967	30.0	1,875	28.9	520	30.4	3,996	29.
Total	529	100.0	1,472	100.0	3,220	100.0	6,498	100.0	1,713	100.0	13,432	100.
Baccalaureate												
Graduated	795	58.6	1,503	57.0	1,571	55.2	2,113	53.1	372	46.0	6,354	54.
Withdrew	562	41.4	1,132	43.0	1,275	44.8	1,868	46.9	436	54.0	5,273	45.
Total	1,357	100.0	2,635	100.0	2,846	100.0	3,981	100.0	808	100.0	11,627	100.

$\chi^2 = 43.04$, df = 4, p less than .001, cc .073.

[1] Excludes all whose social index was undetermined or unknown. (For derivation of social index see text page 9.)

Table 10.—Graduated/withdrew, by father's social index and type of program: all years combined [1]

Status	Father's social index: One No.	Pct.	Two No.	Pct.	Three No.	Pct.	Four No.	Pct.	Five No.	Pct.	Total No.	Pct.
						Associate degree						
d	366	59.8	874	59.4	1,289	59.4	2,999	61.1	753	57.6	6,281	60.0
	246	40.2	597	40.6	880	40.6	1,909	38.9	554	42.4	4,186	40.0
	612	100.0	1,471	100.0	2,169	100.0	4,908	100.0	1,307	100.0	10,467	100.0
						Diploma						
d	360	68.1	1,007	68.4	2,253	70.0	4,623	71.1	1,193	69.6	9,436	70.3
	169	31.9	465	31.6	967	30.0	1,875	28.9	520	30.4	3,996	29.7
	529	100.0	1,472	100.0	3,220	100.0	6,498	100.0	1,713	100.0	13,432	100.0
						Baccalaureate						
d	795	58.6	1,503	57.0	1,571	55.2	2,113	53.1	372	46.0	6,354	54.6
	562	41.4	1,132	43.0	1,275	44.8	1,868	46.9	436	54.0	5,273	45.4
	1,357	100.0	2,635	100.0	2,846	100.0	3,981	100.0	808	100.0	11,627	100.0

04, df = 4, p less than .001, cc .073.

s all whose social index was undetermined or unknown. (For derivation of social index see text page 9.)

Table 11.—Graduated/withdrew, by mother's occupation and type of program: all years combined [1]

Status	Mother's occupation: R N or P N No.	Pct.	Other occupation No.	Pct.	Housewife No.	Pct.	Total No.	Pct.
				Associate degree				
Graduated	509	61.0	2,618	58.9	2,167	61.1	5,294	60.0
Withdrew	326	39.0	1,825	41.1	1,382	38.9	3,533	40.0
Total	835	100.0	4,443	100.0	3,549	100.0	8,827	100.0
				Diploma				
Graduated	717	72.2	3,593	68.0	2,781	69.8	7,091	69.1
Withdrew	276	27.8	1,689	32.0	1,204	30.2	3,169	30.9
Total	993	100.0	5,282	100.0	3,985	100.0	10,260	100.0
				Baccalaureate				
Graduated	698	59.4	2,356	52.2	1,939	52.4	4,993	53.2
Withdrew	478	40.6	2,155	47.8	1,758	47.6	4,391	46.8
Total	1,176	100.0	4,511	100.0	3,697	100.0	9,384	100.0

$\chi^2 = 20.43$, df = 2, p less than .001, cc .061.

[1] Excludes ambiguous, unidentified, and no response to mother's occupation.

mothers were nurses were graduated, while slightly more than 52 percent of those whose mothers were in other types of work or were housewives completed work for their degrees.

Table 12 combines the reported years of both parents' education and describes graduated/withdrew by resulting categories. As with some of the other variables describing parents, only the baccalaureate group has a statistically significant relationship. However, it is noteworthy that associate degree and diploma participants whose parents both had fewer than 10 years of education were graduated in higher proportions than their cohorts whose parents had more education: 63.0 percent of the associate degree and 71.8 percent of the diploma participants whose parents had fewer than 10 years of education were graduated. But the more years of education completed by one or both parents, the higher the proportion of participants in the baccalaureate group graduated; the highest graduation rate was among those who reported 14 to 15, 16, or over 16 years of education for both father and mother: 56.7 percent as compared with 54.0 percent for the total group. Among those baccalaureate students whose parents both had 10 years or fewer of education, fewer than half completed the nursing program.

Table 12.—Graduated/withdrew, by parents' education and type of program: all years combined [1]

Status	Parent's education													
	Both under 10 years		One 8–9–10 one 11–12–13 years		One 8–9–10 one 14–15–16 over 16 years		Both 11–12–13 years		One 11–12–13 one 14–15–16 over 16 years		Both 14–15–16 over 16 years		Total	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Associate degree														
Graduated	1,421	63.0	1,492	62.0	338	59.7	2,202	60.0	1,504	58.4	1,003	60.9	7,960	60
Withdrew	833	37.0	913	38.0	228	40.3	1,467	40.0	1,072	41.6	643	39.1	5,156	39
Total	2,254	100.0	2,405	100.0	566	100.0	3,669	100.0	2,576	100.0	1,646	100.0	13,116	100
Diploma														
Graduated	1,593	71.8	2,198	69.2	440	69.8	3,281	69.4	2,009	69.9	1,017	68.3	10,538	69
Withdrew	626	28.2	977	30.8	190	30.2	1,445	30.6	865	30.1	471	31.7	4,574	30
Total	2,219	100.0	3,175	100.0	630	100.0	4,726	100.0	2,874	100.0	1,488	100.0	15,112	100
Baccalaureate														
Graduated	488	48.8	822	51.9	279	53.1	1,792	52.7	1,813	55.3	1,836	56.7	7,030	54
Withdrew	513	51.2	763	48.1	246	46.9	1,607	47.3	1,468	44.7	1,402	43.3	5,999	46
Total	1,001	100.0	1,585	100.0	525	100.0	3,399	100.0	3,281	100.0	3,238	100.0	13,029	100

$\chi^2 = 28.00$, df = 5, p less than .001, cc .055.

[1] Excludes years of education ambiguous or unknown for one or both parents.

Table 12.—Graduated/withdrew, by parents' education and type of program: all years combined [1]

Status	Parent's education													
	Both under 10 years		One 8–9–10 one 11–12–13 years		One 8–9–10 one 14–15–16 over 16 years		Both 11–12–13 years		One 11–12–13 one 14–15–16 over 16 years		Both 14–15–16 over 16 years		Total	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Associate degree														
raduated	1,421	63.0	1,492	62.0	338	59.7	2,202	60.0	1,504	58.4	1,003	60.9	7,960	60.
ithdrew	833	37.0	913	38.0	228	40.3	1,467	40.0	1,072	41.6	643	39.1	5,156	39.
Total	2,254	100.0	2,405	100.0	566	100.0	3,669	100.0	2,576	100.0	1,646	100.0	13,116	100.
Diploma														
raduated	1,593	71.8	2,198	69.2	440	69.8	3,281	69.4	2,009	69.9	1,017	68.3	10,538	69.
ithdrew	626	28.2	977	30.8	190	30.2	1,445	30.6	865	30.1	471	31.7	4,574	30.
Total	2,219	100.0	3,175	100.0	630	100.0	4,726	100.0	2,874	100.0	1,488	100.0	15,112	100.
Baccalaureate														
raduated	488	48.8	822	51.9	279	53.1	1,792	52.7	1,813	55.3	1,836	56.7	7,030	54.
ithdrew	513	51.2	763	48.1	246	46.9	1,607	47.3	1,468	44.7	1,402	43.3	5,999	46.
Total	1,001	100.0	1,585	100.0	525	100.0	3,399	100.0	3,281	100.0	3,238	100.0	13,029	100.

= 28.00, df = 5, p less than .001, cc .055.

[1] Excludes years of education ambiguous or unknown for one or both parents.

Education Prior to Nursing School

In the following tables, high school academic standing, geographic location of high school, and previous attendance in a school of nursing are described according to those who graduated and those who withdrew.

Academic standing in high school was determined from responses to a check list which allowed the following options: top fourth, second fourth, third fourth, and bottom fourth. As might be expected, participants who reported being in the top fourth of their high school classes were more likely to be graduated than those whose academic standing in high school was lower (table 13). For those in the top fourth of their high school classes, 69.9 percent of associate degree, 75.8 percent of diploma, and 62.3 percent of baccalaureate degree participants were graduated, as compared with 60.8 percent, 69.9 percent, and 54.2 percent for the total of each group, respectively. Those who reported themselves to be at the bottom fourth of their high school classes were a small group, but of these, 45.6 percent of associate degree, 58.5 percent of diploma and only 15.3 of the baccalaureate group were graduated from the nursing program.

Although all three parts of table 14—location of high school—separated by graduated or withdrew, yield statistical results which could be considered significant, each group differed descriptively. The associate degree participants who had gone to high schools in the New England States had the highest rate of graduation, 66.3 percent, and those whose high schools had been in the East South Central, the lowest, 51.2 percent, as contrasted with 60.5 percent for the total group. Those from high schools in the Middle Atlantic States had the highest graduation rate for the diploma group, 75.3 percent, the Mountain States the lowest, 53.8 percent, while graduations for the total group comprised 69.6 percent. Baccalaureate students from high schools in the East North Central States were graduated more frequently, 64.5 percent, than baccalaureate students from other areas. The lowest rate of graduation for baccalaureate students was found among those who had attended high schools in the West South Central, 36.5 percent.

Graduation appears to be more likely for entrants into associate degree and diploma programs if students had been in nursing school previously (table 15). More than 7 out of 10, 73.4 percent, of those who had previously attended nursing schools were graduated from associate degree programs, but only 58.0 percent of those who had no prior nursing education were graduated. Among diploma students who had prior nursing school exposure, 76.2 percent were graduated and 69.4 percent of those with no prior nursing school

Table 13.—Graduated/withdrew, by high school academic standing and type of program: all years combined [1]

Status	High school standing: Top fourth No.	Top fourth Pct.	Second fourth No.	Second fourth Pct.	Third fourth No.	Third fourth Pct.	Bottom fourth No.	Bottom fourth Pct.	Total No.	Total Pct.
Associate degree										
Graduated	3,426	69.9	3,196	57.2	1,026	50.5	108	45.6	7,756	
Withdrew	1,475	30.1	2,396	42.8	1,006	49.5	129	54.4	5,006	
Total	4,901	100.0	5,592	100.0	2,032	100.0	237	100.0	12,762	1
χ^2 = 315.22, df = 3, p less than .001, cc .193.										
Diploma										
Graduated	5,657	75.8	3,886	65.6	827	58.2	62	58.5	10,432	
Withdrew	1,810	24.2	2,036	34.4	595	41.8	44	41.5	4,485	
Total	7,467	100.0	5,922	100.0	1,422	100.0	106	100.0	14,917	1
χ^2 = 273.35, df = 3, p less than .001, cc .167.										
Baccalaureate										
Graduated	5,210	62.3	1,588	43.2	223	26.7	18	15.3	7,039	
Withdrew	3,157	37.7	2,084	56.8	613	73.3	100	84.7	5,954	
Total	8,367	100.0	3,672	100.0	836	100.0	118	100.0	12,993	1
χ^2 = 724.10, df = 3, p less than .001, cc .286.										

[1] Excludes high school standing ambiguous and no response.

Table 13.—Graduated/withdrew, by high school academic standing and type of program: all years combined [1]

Status	High school standing								Total	
	Top fourth		Second fourth		Third fourth		Bottom fourth			
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
					Associate degree					
raduated	3,426	69.9	3,196	57.2	1,026	50.5	108	45.6	7,756	60.8
Vithdrew	1,475	30.1	2,396	42.8	1,006	49.5	129	54.4	5,006	39.2
Total	4,901	100.0	5,592	100.0	2,032	100.0	237	100.0	12,762	100.0
^{2} = 315.22, df = 3, p less than .001, cc .193.										
					Diploma					
raduated	5,657	75.8	3,886	65.6	827	58.2	62	58.5	10,432	69.9
Vithdrew	1,810	24.2	2,036	34.4	595	41.8	44	41.5	4,485	30.1
Total	7,467	100.0	5,922	100.0	1,422	100.0	106	100.0	14,917	100.0
^{2} = 273.35, df = 3, p less than .001, cc .167.										
					Baccalaureate					
aduated	5,210	62.3	1,588	43.2	223	26.7	18	15.3	7,039	54.2
thdrew	3,157	37.7	2,084	56.8	613	73.3	100	84.7	5,954	45.8
Total	8,367	100.0	3,672	100.0	836	100.0	118	100.0	12,993	100.0
= 724.10, df = 3, p less than .001, cc .286.										

[1] Excludes high school standing ambiguous and no response.

Table 14.—Graduated/withdrew, by location of high school[1] and type of program: all years combined[2]

Status	New England No.	New England Pct.	Middle Atlantic No.	Middle Atlantic Pct.	East North Central No.	East North Central Pct.	West North Central No.	West North Central Pct.	South Atlantic No.	South Atlantic Pct.	East South Central No.	East South Central Pct.	West South Central No.	West South Central Pct.	Mountain No.	Mountain Pct.	Pacific No.	Pacific Pct.	Total No.	Total Pct.
	Location of high school																			
	Associate degree																			
Graduated	462	66.3	1,761	60.5	1,209	63.4	598	61.6	865	53.8	319	51.2	320	56.9	418	63.0	2,124	62.1	8,076	60
Withdrew	235	33.7	1,149	39.5	698	36.6	372	38.4	744	46.2	304	48.8	242	43.1	245	37.0	1,294	37.9	5,283	39
Total	697	100.0	2,910	100.0	1,907	100.0	970	100.0	1,609	100.0	623	100.0	562	100.0	663	100.0	3,418	100.0	13,359	100
$\chi^2 = 78.70$, df = 8, p less than .001, cc .088.																				
	Diploma																			
Graduated	1,157	72.8	3,029	75.3	3,028	72.0	935	71.6	964	62.9	333	57.4	543	57.5	210	53.8	309	57.6	10,508	69
Withdrew	432	27.2	991	24.7	1,178	28.0	370	28.4	569	37.1	247	42.6	402	42.5	180	227	46.2	42.4	4,596	30
Total	1,589	100.0	4,020	100.0	4,206	100.0	1,305	100.0	1,533	100.0	580	100.0	945	100.0	390	536	100.0	100.0	15,104	100
$\chi^2 = 305.46$, df = 8, p less than .001, cc .161.																				
	Baccalaureate																			
Graduated	306	57.1	1,630	64.0	1,108	64.5	870	63.5	609	48.1	216	58.9	858	36.5	392	42.0	1,070	51.5	7,059	53
Withdrew	230	42.9	915	36.0	609	35.5	501	36.5	657	51.9	151	41.1	1,495	63.5	541	58.0	1,007	48.5	6,106	46
Total	536	100.0	2,545	100.0	1,717	100.0	1,371	100.0	1,266	100.0	367	100.0	2,353	100.0	933	100.0	2,077	100.0	13,165	100
$\chi^2 = 601.63$, df = 8, p less than .001, cc .239.																				

[1] New England — Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut
Middle Atlantic — New York, New Jersey, Pennsylvania
East North Central — Ohio, Indiana, Illinois, Michigan, Wisconsin
West North Central — Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas
South Atlantic — Delaware, Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, District of Columbia
East South Central — Kentucky, Tennessee, Alabama, Mississippi
West South Central — Louisiana, Texas, Arkansas, Oklahoma
Mountain — Montana, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Idaho
Pacific — Washington, Oregon, California, Hawaii, Alaska

[2] Excludes location of high school unknown, G.E.D., and foreign high school.

Table 14.—Graduated/withdrew, by location of high school[1] and type of program: all years combined[2]

Status	New England No.	Pct.	Middle Atlantic No.	Pct.	East North Central No.	Pct.	West North Central No.	Pct.	South Atlantic No.	Pct.	East South Central No.	Pct.	West South Central No.	Pct.	Mountain No.	Pct.	Pacific No.	Pct.	Total No.	Pct.
									Location of high school											
Associate degree																				
aduated --	462	66.3	1,761	60.5	1,209	63.4	598	61.6	865	53.8	319	51.2	320	56.9	418	63.0	2,124	62.1	8,076	60.5
ithdrew ----	235	33.7	1,149	39.5	698	36.6	372	38.4	744	46.2	304	48.8	242	43.1	245	37.0	1,294	37.9	5,283	39.5
Total ------	697	100.0	2,910	100.0	1,907	100.0	970	100.0	1,609	100.0	623	100.0	562	100.0	663	100.0	3,418	100.0	13,359	100.0
= 78.70, df = 8, p less than .001, cc .068.																				
Diploma																				
raduated --1,157		72.8	3,029	75.3	3,028	72.0	935	71.6	964	62.9	333	57.4	543	57.5	210	53.8	309	57.6	10,508	69.6
ithdrew ----	432	27.2	991	24.7	1,178	28.0	370	28.4	569	37.1	247	42.6	402	42.5	180	227	46.2	42.4	4,596	30.4
Total ------1,589		100.0	4,020	100.0	4,206	100.0	1,305	100.0	1,533	100.0	580	100.0	945	100.0	390	536	100.0	100.0	15,104	100.0
= 305.46, df = 8, p less than .001, cc .161.																				
Baccalaureate																				
raduated --	306	57.1	1,630	64.0	1,108	64.5	870	63.5	609	48.1	216	58.9	858	36.5	392	42.0	1,070	51.5	7,059	53.6
ithdrew ----	230	42.9	915	36.0	609	35.5	501	36.5	657	51.9	151	41.1	1,495	63.5	541	58.0	1,007	48.5	6,106	46.4
Total ------	536	100.0	2,545	100.0	1,717	100.0	1,371	100.0	1,266	100.0	367	100.0	2,353	100.0	933	100.0	2,077	100.0	13,165	100.0
= 601.63, df = 8, p less than .001, cc .239.																				

[1] New England ..... Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut
Middle Atlantic ..... New York, New Jersey, Pennsylvania
East North Central ..... Ohio, Indiana, Illinois, Michigan, Wisconsin
West North Central ..... Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas
South Atlantic ..... Delaware, Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, District of Columbia
East South Central ..... Kentucky, Tennessee, Alabama, Mississippi
West South Central ..... Louisiana, Texas, Arkansas, Oklahoma
Mountain ..... Montana, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Idaho
Pacific ..... Washington, Oregon, California, Hawaii, Alaska

[2] Excludes location of high school unknown, G.E.D., and foreign high school.

Table 15.—Graduated/withdrew, by previous attendance in nursing school and type of current program: all years combined [1]

Status	Previous attendance: No previous nursing No.	Pct.	Previously attended [2] No.	Pct.	Total No.	Pct.
			Associate degree			
Graduated	6,665	58.0	1,726	73.4	8,391	60.6
Withdrew	4,833	42.0	626	26.6	5,459	39.4
Total	11,498	100.0	2,352	100.0	13,850	100.0
$\chi^2 = 194.36$, df = 1, p less than .001, cc .166.						
			Diploma			
Graduated	10,294	69.4	486	76.2	10,780	69.7
Withdrew	4,536	30.6	152	23.8	4,688	30.3
Total	14,830	100.0	638	100.0	15,468	100.0
$\chi^2 = 13.24$, df = 1, p less than .001, cc .041.						
			Baccalaureate			
Graduated	6,997	53.6	195	53.0	7,192	53.6
Withdrew	6,045	46.4	173	47.0	6,218	46.4
Total	13,042	100.0	368	100.0	13,410	100.0

[1] Excludes previous attendance unknown.

[2] Previous nursing school may have been practical nurse program from which participant graduated.

experience were graduated. Some of those reporting previous attendance in a nursing school had previously been in practical nurse programs, and many of them were graduates. This was most frequent among the associate degree group, where more than a third of those who had previously attended nursing schools reported attendance in a practical nursing program (*6*).

Graduation/Withdrawal of Four Specific Groups

Since some of the previously described variables are no doubt related to each other, and since the variance within the three programs is not measurable by technics applied so far in the data analysis, four specific groups were separated by controls introduced into the cross-tabulation process and the graduated/withdrew data were compared with high school academic standing. These groups comprised the single, white; single, black; married and formerly married, white; and married and formerly married black participants (tables 16–19). No statistical results are included, since many of the cells are small or empty. However, for the most part, the

Table 16.—Graduation/withdrawal of single white participants, by high school academic standing and type of program: all years combine

Status	High school standing								Total	
	Top fourth		Second fourth		Third fourth		Bottom fourth			
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Associate degree										
Graduated	2,174	68.7	2,084	53.5	626	45.8	58	42.6	4,942	5
Withdrew	989	31.3	1,811	46.5	740	54.2	78	57.4	3,618	4
Total	3,163	100.0	3,895	100.0	1,366	100.0	136	100.0	8,560	10
Diploma										
Graduated	5,348	76.3	3,665	65.9	755	57.9	53	58.9	9,821	7
Withdrew	1,662	23.7	1,895	34.1	549	42.1	37	41.1	4,143	2
Total	7,010	100.0	5,560	100.0	1,304	100.0	90	100.0	13,964	10
Baccalaureate										
Graduated	4,936	63.3	1,459	44.1	177	27.4	11	15.1	6,583	5
Withdrew	2,857	36.7	1,853	55.9	470	72.6	62	84.9	5,242	4
Total	7,793	100.0	3,312	100.0	647	100.0	73	100.0	11,825	10

[1] Excludes high school standing ambiguous and no response for single white participants.

Table 18.—Graduation/withdrawal of single white participants, by high school academic standing and type of program: all years combined [1]

Status	High school standing: Top fourth No.	Top fourth Pct.	Second fourth No.	Second fourth Pct.	Third fourth No.	Third fourth Pct.	Bottom fourth No.	Bottom fourth Pct.	Total No.	Total Pct.
Associate degree										
Graduated	2,174	68.7	2,084	53.5	626	45.8	58	42.6	4,942	57.7
Withdrew	989	31.3	1,811	46.5	740	54.2	78	57.4	3,618	42.3
Total	3,163	100.0	3,895	100.0	1,366	100.0	136	100.0	8,560	100.0
Diploma										
Graduated	5,348	76.3	3,665	65.9	755	57.9	53	58.9	9,821	70.3
Withdrew	1,662	23.7	1,895	34.1	549	42.1	37	41.1	4,143	29.7
Total	7,010	100.0	5,560	100.0	1,304	100.0	90	100.0	13,964	100.0
Baccalaureate										
Graduated	4,936	63.3	1,459	44.1	177	27.4	11	15.1	6,583	55.7
Withdrew	2,857	36.7	1,853	55.9	470	72.6	62	84.9	5,242	44.3
Total	7,793	100.0	3,312	100.0	647	100.0	73	100.0	11,825	100.0

[1] Excludes high school standing ambiguous and no response for single white participants.

Table 17.—Graduation/withdrawal of single black participants, by high school academic standing and type of program: all years combine

Status	High school standing								Total	
	Top fourth		Second fourth		Third fourth		Bottom fourth			
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
					Associate degree					
Graduated	104	52.0	70	40.2	36	32.7	3	18.8	213	4
Withdrew	96	48.0	104	59.8	74	67.3	13	81.2	287	5
Total	200	100.0	174	100.0	110	100.0	16	100.0	500	10
					Diploma					
Graduated	127	67.6	81	57.4	25	54.3	1	16.7	234	6
Withdrew	61	32.4	60	42.6	21	45.7	5	83.3	147	3
Total	188	100.0	141	100.0	46	100.0	6	100.0	381	10
					Baccalaureate					
Graduated	115	40.1	50	26.6	20	15.9	3	8.6	188	2
Withdrew	172	59.9	138	73.4	106	84.1	32	91.4	448	7
Total	287	100.0	188	100.0	126	100.0	35	100.0	636	10

[1] Excludes high school standing ambiguous and no response for single Negro participants.

e 17.—Graduation/withdrawal of single black participants, by high school academic standing and type of program: all years combined [1]

Status	High school standing								Total	
	Top fourth		Second fourth		Third fourth		Bottom fourth			
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
					Associate degree					
uated	104	52.0	70	40.2	36	32.7	3	18.8	213	42.6
drew	96	48.0	104	59.8	74	67.3	13	81.2	287	57.4
tal	200	100.0	174	100.0	110	100.0	16	100.0	500	100.0
					Diploma					
uated	127	67.6	81	57.4	25	54.3	1	16.7	234	61.4
drew	61	32.4	60	42.6	21	45.7	5	83.3	147	38.6
tal	188	100.0	141	100.0	46	100.0	6	100.0	381	100.0
					Baccalaureate					
uated	115	40.1	50	26.6	20	15.9	3	8.6	188	29.6
drew	172	59.9	138	73.4	106	84.1	32	91.4	448	70.4
tal	287	100.0	188	100.0	126	100.0	35	100.0	636	100.0

cludes high school standing ambiguous and no response for single Negro participants.

Table 18.—Graduation/withdrawal of married and formerly married white participants, by high school academic standing and type of program: all years combined [1]

Status	High school standing								Total	
	Top fourth		Second fourth		Third fourth		Bottom fourth			
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Associate degree										
Graduated	992	77.3	859	71.2	288	67.3	36	63.2	2,175	7
Withdrew	291	22.7	347	28.8	140	32.7	21	36.8	799	2
Total	1,283	100.0	1,206	100.0	428	100.0	57	100.0	2,974	10
Diploma										
Graduated	97	67.8	82	66.7	27	62.8	4	66.7	210	6
Withdrew	46	32.2	41	33.3	16	37.2	2	33.3	105	3
Total	143	100.0	123	100.0	43	100.0	6	100.0	315	10
Baccalaureate										
Graduated	76	52.4	34	42.5	7	29.2	1	25.0	118	4
Withdrew	69	47.6	46	57.5	17	70.8	3	75.0	135	5
Total	145	100.0	80	100.0	24	100.0	4	100.0	253	10

[1] Excludes high school standing ambiguous and no response for married and formerly married white participants.

Table 18.—Graduation/withdrawal of married and formerly married white participants, by high school academic standing and type of program: all years combined [1]

Status	High school standing: Top fourth No.	Top fourth Pct.	Second fourth No.	Second fourth Pct.	Third fourth No.	Third fourth Pct.	Bottom fourth No.	Bottom fourth Pct.	Total No.	Total Pct.
Associate degree										
Graduated	992	77.3	859	71.2	288	67.3	36	63.2	2,175	73.1
Withdrew	291	22.7	347	28.8	140	32.7	21	36.8	799	26.9
Total	1,283	100.0	1,206	100.0	428	100.0	57	100.0	2,974	100.0
Diploma										
Graduated	97	67.8	82	66.7	27	62.8	4	66.7	210	66.7
Withdrew	46	32.2	41	33.3	16	37.2	2	33.3	105	33.3
Total	143	100.0	123	100.0	43	100.0	6	100.0	315	100.0
Baccalaureate										
Graduated	76	52.4	34	42.5	7	29.2	1	25.0	118	46.6
Withdrew	69	47.6	46	57.5	17	70.8	3	75.0	135	53.4
Total	145	100.0	80	100.0	24	100.0	4	100.0	253	100.0

[1] Excludes high school standing ambiguous and no response for married and formerly married white participants.

Table 19.—Graduation/withdrawal of married and formerly married black participants, by high school academic standing and type of program: all years combined [1]

Status	High school standing								Total	
	Top fourth		Second fourth		Third fourth		Bottom fourth			
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Associate degree										
Graduated	78	59.1	98	62.8	42	63.6	4	44.4	222	61
Withdrew	54	40.9	58	37.2	24	36.4	5	55.6	141	38
Total	132	100.0	156	100.0	66	100.0	9	100.0	363	100
Diploma										
Graduated	14	77.8	3	50.0	0	0	0	0	17	65
Withdrew	4	22.2	3	50.0	2	100.0	0	0	9	34
Total	18	110.0	6	100.0	2	100.0	0	0	26	100
Baccalaureate										
Graduated	5	50.0	2	20.0	4	36.4	2	100.0	13	39
Withdrew	5	50.0	8	80.0	7	63.6	0	0	20	60
Total	10	100.0	10	100.0	11	100.0	2	100.0	33	100

[1] Excludes high school standing ambiguous and no response for married and formerly married Negro participants.

Table 19.—Graduation/withdrawal of married and formerly married black participants, by high school academic standing and type of program: all years combined [1]

Status	High school standing								Total	
	Top fourth		Second fourth		Third fourth		Bottom fourth			
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Associate degree										
Graduated	78	59.1	98	62.8	42	63.6	4	44.4	222	61.2
Withdrew	54	40.9	58	37.2	24	36.4	5	55.6	141	38.8
Total	132	100.0	156	100.0	66	100.0	9	100.0	363	100.0
Diploma										
Graduated	14	77.8	3	50.0	0	0	0	0	17	65.4
Withdrew	4	22.2	3	50.0	2	100.0	0	0	9	34.6
Total	18	110.0	6	100.0	2	100.0	0	0	26	100.0
Baccalaureate										
Graduated	5	50.0	2	20.0	4	36.4	2	100.0	13	39.4
Withdrew	5	50.0	8	80.0	7	63.6	0	0	20	60.6
Total	10	100.0	10	100.0	11	100.0	2	100.0	33	100.0

[1] Excludes high school standing ambiguous and no response for married and formerly married Negro participants.

descriptive results are all in the same direction. Those who had been at the top of their high school classes were more likely to be graduated from nursing school than those whose high school standing had been lower, regardless of marital status or ethnic group. The only exception occurred among the associate degree married and formerly married black participants. In this group, those in the middle half of their high school classes (second and third fourths) were graduated in greater proportions than those in the top fourth of their high school classes (table 19).

Table 1, chapter II, shows for all of each group that approximately 61 percent of the associate degree, 70 percent of the diploma, and 54 percent of the baccalaureate participants were graduated. Examination of the total column of tables 16 through 19 shows both differences and similarities between proportions graduating and proportions for the total group.

Among associate degree single participants, both white and black, proportions for all those graduating, 57.7 percent and 42.6 percent, respectively, were lower than the proportion for the entire associate degree group. On the other hand, married and formerly married white associate degree respondents had 73.1 percent graduating, higher than the proportion of the total group, and 61 percent of the married and formerly married black group were graduated, which is reflective of the entire associate degree group.

The distribution of proportions for all graduates by marital status and ethnic group shows that the diploma and baccalaureate students are different from the associate degree. Of the single white diploma participants, 70.3 percent were graduated (table 16), which is reflective of the total diploma group. However, all other marital and ethnic groups in diploma programs had lower proportions graduating: 61.4 percent of the single black group, 66.7 percent of the married and formerly married white, and 65.4 percent of the married and formerly married black. Among baccalaureate students, 55.7 percent of the single white group were graduated, slightly higher than the proportions of all those in the baccalaureate group who finished the program. However, 29.6 percent of the single black, 46.6 percent of the white, and 39.4 percent of the black married and formerly married groups were graduated from baccalaureate nursing programs.

Consideration of each table separately indicates that fewer than half of the single white associate degree students who were in the bottom half of their high school classes were graduated (table 16.). Although 76.3 percent of the single white diploma group who had been in the top fourth of their high school classes were graduated, more than 57 percent of those in the bottom half also were

graduated; 63.3 percent of the baccalaureate single white group who had been in the top quarter of their high school classes were graduated, but very few, ranging from 15.1 percent to 27.4 percent, in the lower two quarters were graduated.

Table 17 demonstrates not only the impact of high school academic standing on the possibility of graduation from nursing school for single black participants (most of this group in each program had been in the top fourth of their high school classes), but also that only among the diploma group did more than half of the single black students finish—61.4 percent. Fifty-two percent of the associate degree and 40.1 percent of the baccalaureate single black students who had been in the top fourth of their high school classes completed the nursing program, and in both of these programs, more single black students withdrew than were graduated.

Table 18 gives proportions graduating or withdrawing for married and formerly married white participants. For the most part, proportions are in the direction expected, with those with better academic standing in high school being more likely to be graduated. However, the total number for the diploma and baccalaureate groups in this table and in table 19 are relatively small when considered in light of the size of the entire group. The small group of married and formerly married black students had sizable proportions graduating from the associate degree program, as long as they had not been in the bottom fourth of their high school classes (table 19). Of the 26 diploma students who fell into the married and formerly married black group, 17 were graduated, and of the 33 in the baccalaureate group, 13 were graduated.

Summary

Certain personal and parental characteristics and three items referring to prior education have been examined by graduation or withdrawal from nursing school and differences noted.

From the data of this study, marital status, age, and prior attendance in a nursing program appear to exert an influence upon the possibility of graduation from the associate degree program, with higher rates for married, older students and those who had been in nursing programs before their current enrollment than for younger, single cohorts without prior nursing school experience. Diploma students who were Roman Catholic, had attended high school in the same State in which they were born, had fathers who were outdoor workers (including farmers) or were in one of the health fields, and had previously attended nursing school were more likely to have higher proportions graduating than partici-

pants in other categories. Also, women in diploma programs were graduated in higher proportions than men.

Marital status, age, religious preference, comparison of place of birth with place of high school, and all four variables describing parents were related to graduation or withdrawal from baccalaureate programs. Married, older students were graduated less frequently than young, single baccalaureate students. Those who were Roman Catholic and those whose birthplaces and high schools had been in the same State had higher rates of graduation than those with other or no religious preference or those who had changed location between birth and high school. Baccalaureate students whose fathers were outdoor workers or in the health field, whose mothers were registered nurses or licensed practical nurses, whose fathers were at the upper end of the social index scale, and whose parents had completed 14 or more years of education were graduated in higher proportions than their cohorts in other designations. It would be appropriate to consider if the variables describing parents' education and fathers' social index are related specifically to graduation from nursing school or to graduation from any college program. However, the combination of higher graduation rates for baccalaureate students whose mothers were either registered nurses or licensed practical nurses and whose fathers were in a health occupation would imply that certain family influences may have an effect on completion of the baccalaureate nursing program.

There were four variables in all three programs which yielded chi squares with a probability of less than .001: ethnic group, family income, high school academic standing, and location of high school. Students who were not white were graduated in lower proportions than white students. Those at the lowest income level used in this study among the associate degree and baccalaureate participants were graduated least frequently, but diploma participants at the highest income level were graduated least frequently. The better a participant's high school academic record, the better the chance of graduating from nursing school. This was also generally true when data for graduation/withdrawal as related to high school standing were examined, controlled by marital status and ethnic group. In fact, it would appear that baccalaureate students in this study with a low high school scholastic record would have had a greatly diminished chance of graduating from nursing school regardless of marital status or ethnic group.

The implications of the relationship between State in which participants had attended high school and their eventual graduation from nursing school are difficult to determine. Local cultural factors may be hidden by this finding.

In all of the above description and summary, it is essential to keep two factors in mind. First, biographical characteristics of diploma and baccalaureate students were relatively uniform within each type of program. Those not white, married, older, with no religious preference, and a low high school academic standing were exceptions to the students usually admitted to these schools of nursing. The question inherent in all of the observations regarding withdrawal from diploma and baccalaureate programs is: Do students who are not the norm in these schools withdraw more frequently because they are different or because of other factors? The associate degree program in nursing is serving a population which is mixed, especially regarding age and marital status. Here the findings were different from either of the other programs.

Second, there are undoubtedly interrelationships among the variables themselves which are not accessible by cross-tabulation techniques. Age and prior attendance in a nursing program may well be related, as may ethnic group and family income. Family background characteristics may be related to high school records. All of these more complex relationships need further investigation.

References

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5. For a detailed explanation of occupational coding see: Knopf, Lucille and Tate, Barbara L. *Nurse Career-Pattern Study Part I: Practical Nursing Programs.* (Pub. No. 19-1335). National League for Nursing, New York, 1968. Appendix B.
6. Knopf, Lucille. op. cit., 1972, pp. 55–56.

Chapter IV

SCHOOL VARIABLES AND GRADUATED/ WITHDREW

The Career-Pattern Study attempts to link characteristics of individuals who entered schools of nursing to later events in their educational and career history. Data were not gathered specifically about schools of nursing. This study, therefore, is not about schools, per se, although all data are presented by type of program, and schools of nursing were the original sampling unit. There are certain variables, published and readily available, related to schools, which became a part of this study: geographic region, financial support, and religious identification.

This chapter presents three school variables by number and percent of students who were graduated or withdrew: geographic location of school, financial support, and religious identification of nursing school.

A school's geographic region was determined according to generalized divisions in use by the National League for Nursing; grossly, these are: Northeast, Midwest, South, and Far West. Financial support of each nursing school was obtained from the yearly NLN publication, *State-Approved Schools of Nursing-RN*, and coded from data published by NLN corresponding to the year of sample: fall 1962, 1965, and 1967. During the course of the study, source of support did change for some schools, usually from private to public; however, each sample was coded separately before combining the 3 years. Religious identification of associate degree programs was obtained from *American Junior Colleges*, 7th Edition (1967), and for baccalaureate degree schools from *American Universities and Colleges*, 10th Edition (1968), both published by The American Council on Education. Religious identification of diploma programs was determined from a survey of school catalogues and brochures.

Because the NCPS is not primarily a study of schools, descriptive data, not statistical evaluation, appear in the tables.

Table 20 describes graduations or withdrawals by region. Each program has a slightly different distribution. In the West, associate degree programs had the highest proportion of students who were graduated, 63.0 percent; the South had the lowest, 53.3 percent. During the study years there were far more associate degree programs in the West. Some of these may have been established longer than elsewhere and also have attained a degree of stability.

In the Northeast, 74.5 percent of the students attending diploma schools were graduated, but only 63 percent in the South. During the course of the study, some diploma programs that closed, and those that contemplated closing in the near future, declined to continue having their students participate in the study. This resulted in a loss of 30 programs between 1962 and 1967, reducing the number of diploma schools in the study from 130 to 100. Regional analysis of the distribution of the 30 closed or closing programs revealed that among the diploma schools in the study, approximately 16 percent in the Northeast and Midwest had terminated their students' participation, but in the South about 31 percent and in the West 56 percent of schools which had started with the study in 1962 were not in the study in 1967. Because of the unequal rates of closed or closing schools among the diploma sample, the data in table 20 include only diploma programs which participated at all three time periods: 1962, 1965, and 1967.

Students in baccalaureate programs in the Midwest were graduated in higher proportions, 66.4 percent, than baccalaureate students in other parts of the country, and students in the South were graduated least frequently, 42.5 percent.

As might be anticipated, students attending privately supported nursing schools, regardless of type of program, were graduated more frequently than students in publicly supported schools (table 21). The differences in admission requirements to privately and publicly supported schools is, no doubt, a strong factor. In fact, some publicly supported schools are legally mandated to accept all students who apply, while others may have minimal admission standards. Regardless of type of program, however, over 67 percent of students in privately controlled nursing schools were graduated, but the proportions from public schools ranged from 47.1 percent for baccalaureate to 66.1 percent for diploma participants.

Students in schools designated Roman Catholic were graduated in higher proportions than students in schools identified with other Christian religions or in nonsectarian schools (table 22). Over 70 percent of those in schools with a Roman Catholic affiliation were

Table 20.—Graduated/withdrew, by geographic region of nursing school[1] and type of program: all years combined

Status	Geographic region: North East No.	Pct.	Midwest No.	Pct.	South No.	Pct.	West No.	Pct.	Total No.	Pct.
Associate degree										
Graduated	2,262	61.5	1,563	62.6	1,471	53.3	3,097	63.0	8,393	
Withdrew	1,419	38.5	932	37.4	1,288	46.7	1,820	37.0	5,459	
Total	3,681	100.0	2,495	100.0	2,759	100.0	4,917	100.0	13,852	1
Diploma[2]										
Graduated	4,182	74.5	3,482	72.0	1,698	63.0	321	63.6	9,683	
Withdrew	1,431	25.5	1,356	28.0	998	37.0	184	36.4	3,969	
Total	5,613	100.0	4,838	100.0	2,696	100.0	505	100.0	13,652	1
Baccalaureate										
Graduated	1,784	63.8	2,050	66.4	1,827	42.5	1,531	47.4	7,192	
Withdrew	1,013	36.2	1,037	33.6	2,470	57.5	1,698	52.6	6,218	
Total	2,797	100.0	3,087	100.0	4,297	100.0	3,229	100.0	13,410	1

[1] For NLN regional designations see table 8.
[2] Excludes closed or closing schools.

Table 20.—Graduated/withdrew, by geographic region of nursing school[1] and type of program: all years combined

Status	Geographic region: North East No.	North East Pct.	Midwest No.	Midwest Pct.	South No.	South Pct.	West No.	West Pct.	Total No.	Total Pct.
					Associate degree					
raduated	2,262	61.5	1,563	62.6	1,471	53.3	3,097	63.0	8,393	60.6
Vithdrew	1,419	38.5	932	37.4	1,288	46.7	1,820	37.0	5,459	39.4
Total	3,681	100.0	2,495	100.0	2,759	100.0	4,917	100.0	13,852	100.0
					Diploma[2]					
raduated	4,182	74.5	3,482	72.0	1,698	63.0	321	63.6	9,683	70.9
Vithdrew	1,431	25.5	1,356	28.0	998	37.0	184	36.4	3,969	29.1
Total	5,613	100.0	4,838	100.0	2,696	100.0	505	100.0	13,652	100.0
					Baccalaureate					
raduated	1,784	63.8	2,050	66.4	1,827	42.5	1,531	47.4	7,192	53.6
Vithdrew	1,013	36.2	1,037	33.6	2,470	57.5	1,698	52.6	6,218	46.4
Total	2,797	100.0	3,087	100.0	4,297	100.0	3,229	100.0	13,410	100.0

[1] For NLN regional designations see table 8.
[2] Excludes closed or closing schools.

Table 21.—Graduated/withdrew, by financial support of school and type of program: all years combined [1]

Status	Financial support					
	Public		Private		Total	
	No.	Pct.	No.	Pct.	No.	Pct.
			Associate degree			
Graduated	7,018	59.2	1,374	69.0	8,392	60.6
Withdrew	4,843	40.8	616	31.0	5,459	39.4
Total	11,861	100.0	1,990	100.0	13,851	100.0
			Diploma			
Graduated	1,198	66.1	9,582	70.2	10,780	69.7
Withdrew	614	33.9	4,074	29.8	4,688	30.3
Total	1,812	100.0	13,656	100.0	15,468	100.0
			Baccalaureate			
Graduated	4,245	47.1	2,946	67.0	7,191	53.6
Withdrew	4,765	52.9	1,452	33.0	6,217	46.4
Total	9,010	100.0	4,398	100.0	13,408	100.0

[1] Excludes one associate and two baccalaureate respondents for whom financial support of school was omitted.

Table 22.—Graduated/withdrew, by religious identification of nursing school and type of program: all years combined

Status	Religious identification of school							
	Nonsectarian		Roman Catholic		Christian (Not R.C.)		Total	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
				Associate degree				
Graduated	7,525	59.7	385	73.1	483	67.8	8,393	60.6
Withdrew	5,088	40.3	142	26.9	229	32.2	5,459	39.4
Total	12,613	100.0	527	100.0	712	100.0	13,852	100.0
				Diploma				
Graduated	6,307	70.2	2,991	71.4	1,482	64.8	10,780	69.7
Withdrew	2,681	29.8	1,201	28.6	806	35.2	4,688	30.3
Total	8,988	100.0	4,192	100.0	2,288	100.0	15,468	100.0
				Baccalaureate				
Graduated	4,615	48.1	1,410	70.7	1,167	64.1	7,192	53.6
Withdrew	4,980	51.9	584	29.3	654	35.9	6,218	46.4
Total	9,595	100.0	1,994	100.0	1,821	100.0	13,410	100.0

graduated in all three programs. The range for other schools with a religious identification was 64.1 percent for baccalaureate to 67.8 percent for associate degree; and for nonsectarian schools the range was 48.1 percent for baccalaureate to 70.2 percent for diploma. Data in tables 21 and 22 no doubt are related, since schools with a religious identification were privately supported schools.

Range of Percent of Graduates

Percentages graduating within each program varied by school and year of participation. Some schools graduated fewer than half of their students, while others graduated more than 70 percent of their students. These proportions were derived by electronic calculation of the actual number of graduates from each program over the number of Nurse Career-Pattern Study participants at the time of entrance to the program. Then each individual was assigned to the percent category reflective of the proportion graduating from the respective school (table 23). For the 1962 associate degree group, 25.6 percent of the students had been in schools which graduated fewer than 50 percent of the entrants, but by 1967, only 9.5 percent of the participants were in schools which graduated fewer than half of the entrants. Between 1962 and 1967 there was an increase in the proportion of students in associate degree programs which graduated 59 to 69 percent of the entrants, from 53.9 percent to 69.4 percent. For all 3 years, more than 20 percent of the participants had been in associate degree programs which graduated 70 percent or more of entering students.

Among diploma programs, there was a decrease over the 3 years in the percent of students who had been in schools graduating fewer than 50 percent of their students (from 10.2 percent in 1962 to 5.4 percent in 1967) and also for schools graduating between 50 and 69 percent (42.9 percent and 30.8 percent) with a compensatory increase in proportions who had been in schools graduating 70 percent or more of their students (47 percent to 63.7 percent).

Distribution of percent of entrants who were graduated among the baccalaureate schools are different for the 3 years. More than half (57.2 percent) of the 1962 group were graduated from schools in which fewer than 50 percent of the students completed the program. But by 1967, baccalaureate participants were almost evenly divided into three groups: 34.8 percent from schools in which fewer than 50 percent finished, 33 percent from schools in which 50 to 69 percent completed, and 32.2 percent in schools graduating 70 percent or more of their students.

Over the years of this study, it would appear that schools of nursing of all three programs which graduated fewer than 50

year of entrance

Percentages graduating within schools	1962		1965		1967	
	No. of graduates	Pct.	No. of graduates	Pct.	No. of graduates	Pct.
			Associate degree [1]			
Fewer than 50%	584	25.6	1,175	21.3	576	9.5
50–69%	1,231	53.9	3,051	55.2	4,196	69.4
70% and over	468	20.5	1,300	23.5	1,270	21.0
Total	2,283	100.0	5,526	100.0	6,042	100.0
			Diploma			
Fewer than 50%	554	10.2	364	6.4	233	5.4
50–69%	2,340	42.9	2,310	40.4	1,324	30.8
70% and over	2,562	47.0	3,045	53.2	2,736	63.7
Total	5,456	100.0	5,719	100.0	4,293	100.0
			Baccalaureate [1]			
Fewer than 50%	2,115	57.2	2,520	49.9	1,620	34.8
50–69%	806	21.8	1,528	30.3	1,538	33.0
70% and over	779	21.1	1,001	19.8	1,501	32.2
Total	3,700	100.0	5,049	100.0	4,659	100.0

[1] One associate degree case and two baccalaureate cases from 1965 were lost in data processing.

percent of their students decreased, while schools graduating higher proportions increased. However, within each type of program, variations remain among schools in terms of the proportion of their entrants who completed the nursing program.

Summary

Some school characteristics no doubt affect the number of entrants who eventually are graduated. Although data from this study do not specifically identify these factors, implications can be drawn from these sparse descriptions. Public and private, sectarian and nonsectarian schools have different admission requirements and, therefore, may be starting with very different groups of students. Private schools also may be more assiduous in retaining their students.

Differences in regional distribution of participants who were graduated or withdrew leads to the speculation that information relating to regional and local differences may be lost in a national study. Do schools in different areas really differ? Are there local

cultural patterns which encourage students to remain in school until completion? Since most of the study participants are women, are there regional and local variations in the concept of woman's role, as measured by completion of a post-high school educational program?

The interrelationship of the variables described in this chapter is implied but not explored to a depth necessary to explicitly identify institutional involvement in the process of graduation or withdrawal.

It is also apparent among the schools in this study that within each type of program there were wide variations in the proportions of students graduating, ranging from schools graduating fewer than half of their entrants to those graduating over 70 percent. The data in this chapter indicate a need, possibly on a local level, for a highly focused investigation of insitutional factors which facilitate or inhibit graduation from nursing school.

Chapter V

REASONS FOR WITHDRAWAL

For each student who withdrew before graduation, the director of the nursing program was asked to supply one primary reason for withdrawal from a checklist of reasons: scholastic failure, no longer interested in nursing as a career, considered by faculty to be unsuited for nursing, marriage, pregnancy, family or personal problems, financial, to enter another nursing program, poor health, and other or unknown reasons.

The motivation to leave school is a complex one, which is not possible to describe with precision for such a large group with all data gathered by mail. However, useful descriptive data about reasons for leaving school before completion could be obtained, and this seemed the best that could be done within the confines of this study.

When the questionnaire designed for those who withdrew from school was added to the study, the same wording was made part of the questionnaire to participants in order to maintain consistency and have a basis for comparison of the same list of reasons. The totals in table 24 reflect reasons from directors for all the withdrawals; for the participants, all those who returned the withdrawal questionnaire.

For example, of the 5,459 associate degree participants who withdrew before graduation 3,958, or 72.5 percent, returned the withdrawal questionnaire. Response rates for diploma and baccalaureate participants were 79.4 percent and 63.5 percent respectively (table B-2, appendix B). Because of the nature of the data and the complexity of the subject, material in the tables is descriptive only; no statistical implications are included.

Directors of associate degree programs cited scholastic reasons as the cause for withdrawal for 45.7 percent of their students. For another 13.5 percent, the director either had no knowledge of why they had withdrawn or gave a reason which was not included in the check list, such as "moved out of the community." In a few instances students had died. "No longer interested in nursing" was

Table 24.—Primary reason for withdrawal given by director and participant, by type of program: all years combined

Reason for withdrawal	Associate degree				Diploma				Baccalaureate			
	Director		Participant		Director		Participant		Director		Participant	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Scholastic	2,497	45.7	1,040	26.2	1,849	39.4	1,045	28.1	1,294	20.8	721	18.
No longer interested in nursing	692	12.7	664	16.8	893	19.0	656	17.6	1,790	28.8	1,333	33.
Unsuited for nursing	196	3.6	196	4.9	219	4.7	193	5.2	108	1.7	128	3.
Marriage	249	4.6	403	10.2	616	13.1	592	15.9	365	5.9	493	12.
Pregnancy	114	2.1	139	3.5	130	2.8	155	4.2	41	0.7	96	2.
Personal/family problems	562	10.3	586	14.8	271	5.8	416	11.2	206	3.3	325	8.
Financial	60	1.1	221	5.6	18	0.4	67	1.8	52	0.8	171	4.
Illness	222	4.1	223	5.6	210	4.5	184	4.9	146	2.3	112	2.
To enter other nursing program	128	2.3	131	3.3	116	2.5	98	2.6	211	3.4	205	5.
Dissatisfied with program	—	—	127	3.2	—	—	108	2.9	—	—	167	4.
Staff/Faculty	—	—	50	1.3	—	—	52	1.4	—	—	66	1.
[1] Other response and no response	739	13.5	178	4.5	366	7.8	154	4.1	2,005	32.2	129	3.
Total	5,459	100.0	3,958	100.0	4,688	100.0	3,720	100.0	6,218	100.0	3,946	100.

[1] "Other Responses" from director include moved, disciplinary action, deceased, but for most the reason for withdrawal was unknown to the director. "Other Responses" from participant include move disciplinary action, transportation problems, patient and hospital work-related problems.

Table 24.—Primary reason for withdrawal given by director and participant, by type of program: all years combined

Reason for withdrawal	Associate degree				Diploma				Baccalaureate			
	Director		Participant		Director		Participant		Director		Participant	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
lastic	2,497	45.7	1,040	26.2	1,849	39.4	1,045	28.1	1,294	20.8	721	18.3
onger interested in nurs-	692	12.7	664	16.8	893	19.0	656	17.6	1,790	28.8	1,333	33.8
ited for nursing	196	3.6	196	4.9	219	4.7	193	5.2	108	1.7	128	3.2
age	249	4.6	403	10.2	616	13.1	592	15.9	365	5.9	493	12.5
nancy	114	2.1	139	3.5	130	2.8	155	4.2	41	0.7	96	2.4
onal/family problems	562	10.3	586	14.8	271	5.8	416	11.2	206	3.3	325	8.2
cial	60	1.1	221	5.6	18	0.4	67	1.8	52	0.8	171	4.3
s	222	4.1	223	5.6	210	4.5	184	4.9	146	2.3	112	2.8
nter other nursing pro-	128	2.3	131	3.3	116	2.5	98	2.6	211	3.4	205	5.2
tisfied with program	—	—	127	3.2	—	—	108	2.9	—	—	167	4.2
Faculty	—	—	50	1.3	—	—	52	1.4	—	—	66	1.7
er response and no re-	739	13.5	178	4.5	366	7.8	154	4.1	2,005	32.2	129	3.3
onse	5,459	100.0	3,958	100.0	4,688	100.0	3,720	100.0	6,218	100.0	3,946	100.0
Total												

ther Responses" from director include moved, disciplinary action, deceased, but for most the reason for withdrawal was unknown to the director. "Other Responses" from participant include moved, inary action, transportation problems, patient and hospital work-related problems.

all who transferred into a different major area in the same school.

Although the predominant reason given by participants for withdrawing was also scholastic, the proportion, 26.2 percent, was much less than the director had cited. A slightly higher proportion of students than indicated by the director, 16.8 percent, believed they were no longer interested in nursing, and 14.8 percent checked that they had "personal" or "family" problems which precluded their continuing in the associate degree program. Some participants wrote in reasons for withdrawal which were not included in the checklist, some numerous enough or different enough to warrant counting them separately. For example, 3.2 percent of the associate degree withdrawals made adverse critical comments about the type of nursing program they had chosen or the particular school, and 1.3 percent were displeased with the faculty or clinical staff. These two reasons were not mentioned by the directors.

The three reasons cited most frequently by directors of diploma programs for withdrawal of students were "scholastic," 39.4 percent, "no longer interested in nursing," 19.0 percent, and "marriage," 13.1 percent. Students withdrawing from diploma programs gave the same reasons in the same order, but in differing proportions: "scholastic," 28.1 percent, "no longer interested in nursing," 17.6 percent, and "marriage," 15.9 percent. About 3 percent of the diploma withdrawals were dissatisfied with some aspect of the diploma program and slightly more than 1 percent had a problem with staff or faculty.

For almost a third of the withdrawals from the baccalaureate programs, the director usually could not supply a reason for withdrawal. Some students simply did not return to college after a semester break or, as occurred later in the study (with the 1965 and 1967 groups), student records were not kept in the nursing department of the college but, rather, as part of a centralized record keeping system physically or administratively separate from the nursing school. The study staff usually learned of these circumstances from voluntary correspondence from the director of the nursing school. When records were not readily available, it oftentimes became impossible for the director to easily obtain the information requested. It could be assumed, however, that even those directors without access to student files might be more aware of students who were not meeting scholastic standards than they were of other reasons students withdrew from nursing school.

When directors could give a reason for the withdrawal of students from the baccalaureate nursing program, "no longer interested in

lastic reasons," 20.8 percent.

The reasons most often given by participants for withdrawal from the baccalaureate program were the same two: "no longer interested in nursing," 33.8 percent, and "scholastic," 18.3 percent. Somewhat over 4 percent of the baccalaureate withdrawal participants expressed dissatisfaction with the program or school and about 2 percent wrote in reasons related to faculty or staff.

Among the reasons categorized as "other" for all the participants were problems related to clinical practice, work load, or patients.

In general, an examination of directors' and students' reasons shows that directors were more likely to cite scholastic reasons for withdrawal than students. Participants in higher percentages than directors gave "marriage," "family/personal" reasons, or "financial" reasons as cause for withdrawal. In addition, 5.2 percent of the baccalaureate students, slightly more than the proportion given by the director, 3.4 percent, checked that they planned to enter another nursing program.

Reason for Withdrawal and Other Variables

In this section, the primary reason for withdrawal given by directors and participants is presented by year students withdrew and by some of the variables which seemed important in examining graduated/withdrew; that is: marital status, ethnic group, family income, and high school academic standing. The totals are different in each table for several reasons. First, all noncomparable reasons (withdrawals who wrote in a reason instead of checking an option on the list) and all "other and unknown reasons" by either director or participant have been eliminated. Also eliminated are all who may not have responded on the original questionnaire to the item concerning the variable being described. For example, if a participant had not indicated high school standing, even if reason for withdrawal was known, this participant would not be included in the table relating reason for withdrawal to high school standing. Finally, the year of withdrawal was obtained from the participant, not the school, and, therefore, only those who responded to the withdrawal questionnaire could be included. Within these limitations, the data which follow describe certain patterns regarding reasons for withdrawal when examined by year of withdrawal and biographical variables. Examination of reason for withdrawal by year of withdrawal in tables 25, 26, and 27, shows that although proportions differ, patterns of response for both directors and participants are generally similar.

gree program in both years was scholastic. This was followed in frequency in the first year by "no longer interested in nursing," but in the second year the proportions mentioning marriage and/or pregnancy equaled or exceeded lack of interest. Also, in the second year of the associate degree program, proportions of both directors and participants giving "unsuited for nursing" as the reason for withdrawal increased (table 25).

Among diploma withdrawals, scholastic reasons for withdrawal were primary in the first year, but in the second and third years, marriage and/or pregnancy were the reasons most frequently cited. There also was an increase in the third year in the proportions leaving school because of personal or family problems (table 26).

The primary reason for withdrawal among baccalaureate degree students for the first 3 years was "no longer interested in nursing," which included all those who may have stayed in school but changed their major. Second in frequency during the first 3 years from the directors' point of view were "scholastic reasons," but the participants who left the program in the third and fourth years mentioned marriage and/or pregnancy with increasing frequency (table 27).

In table 28, reason for withdrawal is examined by marital status at time of entrance to nursing school. The total group of married and formerly married students who withdrew from diploma and baccalaureate programs for whom reasons were given by either directors or participants is small. Yet the observable pattern in each group is the same, with one exception. Generally, responses from the directors and responses of married and formerly married students indicated such students withdrew more frequently for personal and family problems and for financial reasons, more so than single students who withdrew for scholastic reasons or because they had lost interest in nursing. The exception occurred with the married and formerly married baccalaureate students who withdrew more frequently than their single cohorts because of marriage and/or pregnancy. Among associate degree and diploma married and formerly married withdrawals, illness was given as the cause for withdrawal somewhat more frequently than for single students.

White students in all three programs withdrew less frequently for scholastic reasons than students of other racial and ethnic groups. Directors of the three programs believed students who were not white had withdrawn for scholastic reasons in proportions ranging from 54.8 percent for the baccalaureate to 69.7 percent for the diploma.

Table 25.—Primary reason for withdrawal given by director and participant, by time of withdrawal, associate degree program: all years combined [1]

Reason	Director's reason				Participant's reason			
	First year		Second year		First year		Second year	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Scholastic	1,479	53.8	349	48.7	807	29.1	220	2
No longer interested in nursing	449	16.3	81	11.3	552	19.9	108	1
Unsuited for nursing	98	3.6	45	6.3	138	5.0	58	
Marriage/Pregnancy	192	7.0	81	11.3	382	13.8	151	1
Personal/family problems	325	11.8	77	10.8	455	16.4	126	1
Financial	29	1.1	11	1.5	178	6.4	40	
Illness	118	4.3	41	5.7	161	5.8	61	
To enter other nursing program	61	2.2	31	4.3	100	3.6	28	
Total	2,751	100.0	716	100.0	2,773	100.0	792	10

[1] Excludes unknown and "other" reasons by either director or participant; 12 who withdrew later than second year from associate degree programs which were more than 2 years in length, withdrawals who did not return a questionnaire.

Table 25.—Primary reason for withdrawal given by director and participant, by time of withdrawal, associate degree program: all years combined [1]

Reason	Director's reason				Participant's reason			
	First year		Second year		First year		Second year	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
olastic	1,479	53.8	349	48.7	807	29.1	220	27
longer interested in nursing	449	16.3	81	11.3	552	19.9	108	13
suited for nursing	98	3.6	45	6.3	138	5.0	58	7
rriage/Pregnancy	192	7.0	81	11.3	382	13.8	151	19
rsonal/family problems	325	11.8	77	10.8	455	16.4	126	15
ancial	29	1.1	11	1.5	178	6.4	40	5
ss	118	4.3	41	5.7	161	5.8	61	7
enter other nursing program	61	2.2	31	4.3	100	3.6	28	3
Total	2,751	100.0	716	100.0	2,773	100.0	792	100

Excludes unknown and "other" reasons by either director or participant; 12 who withdrew later than second year from associate degree programs which were more than 2 years in length, a
drawals who did not return a questionnaire.

Table 26.—Primary reason for withdrawal given by director and participant, by time of withdrawal, diploma program: all years combined[1]

Reason	Director's reason						Participant's reason					
	First year		Second year		Third year		First year		Second year		Third year	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Scholastic	1,167	49.7	237	27.6	44	21.7	859	36.9	146	17.4	34	15
No longer interested in nursing	550	23.4	155	18.0	12	5.9	520	22.3	123	14.7	13	5
Unsuited for nursing	79	3.4	84	9.8	14	6.9	109	4.7	69	8.2	13	5
Marriage/pregnancy	251	10.7	260	30.3	94	46.3	338	14.5	304	36.2	104	46
Personal/family problems	122	5.2	59	6.9	21	10.3	262	11.2	115	13.7	37	16
Financial	11	0.5	2	0.2	0	0	49	2.1	14	1.7	3	1
Illness	113	4.8	36	4.2	15	7.4	121	5.2	49	5.8	14	6
To enter other nursing program	56	2.4	26	3.0	3	1.5	71	3.0	19	2.3	4	1
Total	2,349	100.0	859	100.0	203	100.0	2,329	100.0	839	100.0	222	100

[1] Excludes unknown and "other" reasons by either director or participant, and withdrawals who did not return a questionnaire.

ble 28.—Primary reason for withdrawal given by director and participant, by time of withdrawal, diploma program: all years combined [1]

Reason	Director's reason						Participant's reason					
	First year		Second year		Third year		First year		Second year		Third year	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
plastic	1,167	49.7	237	27.6	44	21.7	859	36.9	146	17.4	34	15.3
onger interested in nursing	550	23.4	155	18.0	12	5.9	520	22.3	123	14.7	13	5.9
uited for nursing	79	3.4	84	9.8	14	6.9	109	4.7	69	8.2	13	5.9
riage/pregnancy	251	10.7	260	30.3	94	46.3	338	14.5	304	36.2	104	46.8
onal/family problems	122	5.2	59	6.9	21	10.3	262	11.2	115	13.7	37	16.7
ncial	11	0.5	2	0.2	0	0	49	2.1	14	1.7	3	1.4
ss	113	4.8	36	4.2	15	7.4	121	5.2	49	5.8	14	6.3
nter other nursing program	56	2.4	26	3.0	3	1.5	71	3.0	19	2.3	4	1.8
Total	2,349	100.0	859	100.0	203	100.0	2,329	100.0	839	100.0	222	100.0

cludes unknown and "other" reasons by either director or participant, and withdrawals who did not return a questionnaire.

Table 27.—Primary reason for withdrawal given by director and participant, by time of withdrawal, baccalaureate program: all years combined [1]

Reason	Director's reason								Participant's reason							
	First year		Second year		Third year		Fourth year		First year		Second year		Third year		Fourth year	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Scholastic	424	34.6	295	29.0	91	23.8	17	23.3	404	23.0	236	18.6	61	13.6	13	14
No longer interested in nursing	554	45.2	466	45.9	126	33.0	12	16.4	680	39.2	484	38.2	132	29.3	18	20
Unsuited for nursing	17	1.4	24	2.4	29	7.6	6	8.2	23	1.3	64	5.1	30	6.7	11	12
Marriage/pregnancy	61	5.0	101	9.9	63	16.5	27	37.0	223	12.7	213	16.8	119	26.4	31	35
Personal/family problems	54	4.4	37	3.6	22	5.8	6	8.2	152	8.7	102	8.1	60	13.3	9	10
Financial	19	1.5	14	1.4	3	0.8	1	1.4	90	5.1	70	5.5	10	2.2	1	1
Illness	37	3.0	33	3.2	25	6.5	3	4.1	50	2.8	36	2.8	23	5.1	3	3
To enter other nursing program	61	5.0	46	4.5	23	6.0	1	1.4	124	7.1	61	4.8	15	3.3	1	1
Total	1,227	100.0	1,016	100.0	382	100.0	73	100.0	1,755	100.0	1,266	100.0	450	100.0	87	100

[1] Excludes unknown and "other" reasons by director or participant, and withdrawals who did not return a questionnaire.

Table 27.—Primary reason for withdrawal given by director and participant, by time of withdrawal, baccalaureate program: all years combined [1]

Reason	Director's reason								Participant's reason							
	First year		Second year		Third year		Fourth year		First year		Second year		Third year		Fourth year	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
holastic	424	34.6	295	29.0	91	23.8	17	23.3	404	23.0	236	18.6	61	13.6	13	14.9
longer interested in nursing	554	45.2	466	45.9	126	33.0	12	16.4	689	39.2	484	38.2	132	29.3	18	20.7
suited for nursing	17	1.4	24	2.4	29	7.6	6	8.2	23	1.3	64	5.1	30	6.7	11	12.6
arriage/pregnancy	61	5.0	101	9.9	63	16.5	27	37.0	223	12.7	213	16.8	119	26.4	31	35.6
rsonal/family problems	54	4.4	37	3.6	22	5.8	6	8.2	152	8.7	102	8.1	60	13.3	9	10.3
nancial	19	1.5	14	1.4	3	0.8	1	1.4	90	5.1	70	5.5	10	2.2	1	1.2
ness	37	3.0	33	3.2	25	6.5	3	4.1	50	2.8	36	2.8	23	5.1	3	3.4
enter other nursing program	61	5.0	46	4.5	23	6.0	1	1.4	124	7.1	61	4.8	15	3.3	1	1.2
Total	1,227	100.0	1,016	100.0	382	100.0	73	100.0	1,755	100.0	1,266	100.0	450	100.0	87	100.0

[1] Excludes unknown and "other" reasons by director or participant, and withdrawals who did not return a questionnaire.

Table 28.—Primary reason for withdrawal given by director and participant, by marital status at entrance and type of program: all years combined [1]

Director's and participant's reason	Associate degree				Diploma				Baccalaureate			
	Single		Married and formerly married		Single		Married and formerly married		Single		Married and formerly marrie	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Scholastic:												
Director	2,132	57.3	357	36.5	1,811	43.3	34	29.3	1,259	30.9	27	2
Participant	919	31.8	118	16.9	1,025	30.8	17	25.0	704	20.1	11	1
No longer interested in nursing:												
Director	619	16.6	69	7.1	880	21.0	10	8.6	1,769	43.4	15	1
Participant	621	21.5	43	6.2	646	19.4	9	13.2	1,319	37.8	10	1
Unsuited for nursing:												
Director	135	3.6	61	6.2	212	5.1	6	5.2	102	2.5	4	
Participant	154	5.3	40	5.7	191	5.7	2	2.9	128	3.7	0	
Marriage/pregnancy:												
Director	294	7.9	68	7.0	727	17.4	13	11.2	379	9.3	23	2
Participant	449	15.5	93	13.3	734	22.1	7	10.3	573	16.3	15	2
Personal/family problems:												
Director	276	7.4	284	29.0	236	5.6	32	27.6	173	4.2	29	2
Participant	341	11.8	243	34.9	400	12.0	14	20.6	307	8.8	12	1
Financial:												
Director	35	0.9	25	2.6	13	0.3	5	4.3	47	1.2	5	
Participant	157	5.4	64	9.2	61	1.8	6	8.8	162	4.6	8	1
Illness:												
Director	125	3.4	92	9.4	200	4.8	8	6.9	140	3.4	5	
Participant	145	5.0	75	10.8	174	5.2	9	13.2	109	3.1	3	

ble 28.—Primary reason for withdrawal given by director and participant, by marital status at entrance and type of program: all years combined [1]

ector's and participant's reason	Associate degree				Diploma				Baccalaureate			
	Single		Married and formerly married		Single		Married and formerly married		Single		Married and formerly married	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
lastic:												
ector	2,132	57.3	357	36.5	1,811	43.3	34	29.3	1,259	30.9	27	23.9
rticipant	919	31.8	118	16.9	1,025	30.8	17	25.0	704	20.1	11	16.4
nger interested in nursing:												
ector	619	16.6	69	7.1	880	21.0	10	8.6	1,769	43.4	15	13.3
rticipant	621	21.5	43	6.2	646	19.4	9	13.2	1,319	37.8	10	14.9
ited for nursing:												
ector	135	3.6	61	6.2	212	5.1	6	5.2	102	2.5	4	3.5
rticipant	154	5.3	40	5.7	191	5.7	2	2.9	128	3.7	0	0
age/pregnancy:												
ector	294	7.9	68	7.0	727	17.4	13	11.2	379	9.3	23	20.4
rticipant	449	15.5	93	13.3	734	22.1	7	10.3	573	16.3	15	22.4
nal/family problems:												
ector	276	7.4	284	29.0	236	5.6	32	27.6	173	4.2	29	25.7
rticipant	341	11.8	243	34.9	400	12.0	14	20.6	307	8.8	12	17.9
cial:												
ector	35	0.9	25	2.6	13	0.3	5	4.3	47	1.2	5	4.4
rticipant	157	5.4	64	9.2	61	1.8	6	8.8	162	4.6	8	11.9
:												
ector	125	3.4	92	9.4	200	4.8	8	6.9	140	3.4	5	4.4
rticipant	145	5.0	75	10.8	174	5.2	9	13.2	109	3.1	3	4.5

Table 28.—Primary reason for withdrawal given by director and participant, by marital status at entrance and type of program: all years combined—continued

Director's and participant's reason	Associate degree				Diploma				Baccalaureate			
	Single		Married and formerly married		Single		Married and formerly married		Single		Married and formerly married	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
To enter other nursing program:												
Director	103	2.8	22	2.2	107	2.6	8	6.9	203	5.0	5	4
Participant	107	3.7	21	3.0	93	2.8	4	5.9	196	5.6	8	11
Total:												
Director	3,719	100.0	978	100.0	4,186	100.0	116	100.0	4,072	100.0	113	100
Participant	2,893	100.0	697	100.0	3,324	100.0	68	100.0	3,498	100.0	67	100

[1] Excludes unknown and "other" reason by director or participant, marital status unknown, religious Brother and Sister, and participants who did not return a withdrawal questionnaire.

Table 28.—Primary reason for withdrawal given by director and participant, by marital status at entrance and type of program: all years combined—continued

Director's and participant's reason	Associate degree				Diploma				Baccalaureate			
	Single		Married and formerly married		Single		Married and formerly married		Single		Married and formerly married	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
To enter other nursing program:												
Director	103	2.8	22	2.2	107	2.6	8	6.9	203	5.0	5	4.4
Participant	107	3.7	21	3.0	93	2.8	4	5.9	196	5.6	8	11.9
Total:												
Director	3,719	100.0	978	100.0	4,186	100.0	116	100.0	4,072	100.0	113	100.0
Participant	2,893	100.0	697	100.0	3,324	100.0	68	100.0	3,498	100.0	67	100.0

[1] Excludes unknown and "other" reason by director or participant, marital status unknown, religious Brother and Sister, and participants who did not return a withdrawal questionnaire.

The nonwhite students themselves gave scholastic reasons ranging from 28.4 percent for the baccalaureate to 50.6 percent for the diploma. Table 29 also shows that participants from ethnic groups other than white cited they had withdrawn for financial reasons more frequently than their directors indicated. The directors who gave financial reasons for withdrawal for this group of students ranged from 1.7 percent of the baccalaureate to 2.6 percent for the associate degree, while students cited this reason ranging from 5.0 percent for the diploma to 14.7 for the baccalaureate.

Tables 30, 31, and 32 describe reason for withdrawal by family income as reported at time of entrance to the program. It is important to note that although students cited financial reasons for withdrawal more frequently than directors, the total number giving financial reasons for leaving school was not high. Students in the lowest income group, below $5,000, who left school for financial reasons were: the associate degree, 10.2 percent, diploma, 3.4 percent, and baccalaureate degree 9.8 percent. Two patterns exist in these three tables: the higher the income, the lower the proportion who withdrew for scholastic reasons, and the greater the percentages who withdrew because they were no longer interested in nursing.

Those who withdrew for scholastic reasons among associate degree participants ranged from 53.8 percent among the lowest income group to 49 percent for the highest income group, according to directors' responses. The range of responses for participants, themselves, was 30.6 percent to 28.3 percent. On the other hand, those who were no longer interested in nursing ranged from 12.8 percent of the lowest income group to 16.4 percent of the highest according to directors and 13.6 percent to 21.7 percent according to associate degree participants. Scholastic reasons cited by directors of diploma programs ranged from 43.5 percent at the lower end of the income scale to 38.3 percent at the highest level; as cited by students, the range was 22.2 percent to 27.4 percent. The proportions of those leaving school because of loss of interest in nursing were similar, as cited by both diploma directors and withdrawals, and ranged from somewhat over 17 percent to about 25 percent.

Directors of baccalaureate programs checked scholastic reasons for withdrawal for 33.9 percent of the lowest income level students to 24.1 percent at the highest level, while participants responses in this category were ranged from 22 percent to 17.1 percent. Among baccalaureate students whose directors indicated the students were no longer interested in nursing were 37.2 percent of the lowest income group and 49.5 percent of the highest. Participants responses were 28.8 percent from the below $5,000 level and 45.4 percent from the highest income level.

Table 29.—Primary reason for withdrawal given by director and participant, by ethnic group and type of program: all years combined [1]

Director's and participant's reason	Associate degree				Diploma				Baccalaureate			
	White		Not white		White		Not white		White		Not white	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Scholastic:												
Director	2,158	51.3	329	66.5	1,684	41.2	159	69.7	1,105	28.6	188	54
Participant	885	27.4	151	41.1	963	29.7	81	50.6	638	19.4	81	28
No longer interested in nursing:												
Director	646	15.4	42	8.5	879	21.5	13	5.7	1,692	43.8	93	27
Participant	627	19.4	34	9.3	638	19.7	17	10.6	1,276	38.7	55	19
Unsuited for nursing:												
Director	181	4.3	14	2.8	212	5.2	7	3.1	94	2.4	14	4
Participant	184	5.7	11	3.0	180	5.6	13	8.1	112	3.4	16	5
Marriage/pregnancy:												
Director	342	8.1	21	4.2	729	17.8	16	7.0	393	10.2	12	3
Participant	505	15.7	36	9.8	726	22.4	20	12.5	556	16.9	32	11
Personal/family problems:												
Director	512	12.2	49	9.9	254	6.2	17	7.5	190	4.9	16	4
Participant	522	16.2	63	17.2	405	12.5	10	6.3	282	8.6	43	15
Financial:												
Director	45	1.1	13	2.6	13	0.3	5	2.2	46	1.2	6	1
Participant	179	5.6	41	11.2	58	1.8	8	5.0	129	3.9	42	14
Illness:												
Director	207	4.9	15	3.0	204	5.0	6	2.6	141	3.7	5	1
Participant	206	6.4	17	4.6	178	5.5	6	3.8	105	3.2	7	2

Table 29.—Primary reason for withdrawal given by director and participant, by ethnic group and type of program: all years combined [1]

Director's and participant's reason	Associate degree				Diploma				Baccalaureate			
	White		Not white		White		Not white		White		Not white	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
holastic:												
Director	2,158	51.3	329	66.5	1,684	41.2	159	69.7	1,105	28.6	188	54.8
Participant	885	27.4	151	41.1	963	29.7	81	50.6	638	19.4	81	28.4
longer interested in nursing:												
Director	646	15.4	42	8.5	879	21.5	13	5.7	1,692	43.8	93	27.1
Participant	627	19.4	34	9.3	638	19.7	17	10.6	1,276	38.7	55	19.3
suited for nursing:												
Director	181	4.3	14	2.8	212	5.2	7	3.1	94	2.4	14	4.1
Participant	184	5.7	11	3.0	180	5.6	13	8.1	112	3.4	16	5.6
rriage/pregnancy:												
Director	342	8.1	21	4.2	729	17.8	16	7.0	393	10.2	12	3.5
Participant	505	15.7	36	9.8	726	22.4	20	12.5	556	16.9	32	11.2
rsonal/family problems:												
Director	512	12.2	49	9.9	254	6.2	17	7.5	190	4.9	16	4.7
Participant	522	16.2	63	17.2	405	12.5	10	6.3	282	8.6	43	15.1
nancial:												
Director	45	1.1	13	2.6	13	0.3	5	2.2	46	1.2	6	1.7
Participant	179	5.6	41	11.2	58	1.8	8	5.0	129	3.9	42	14.7
ess:												
Director	207	4.9	15	3.0	204	5.0	6	2.6	141	3.7	5	1.5
Participant	206	6.4	17	4.6	178	5.5	6	3.8	105	3.2	7	2.5

Table 29.—Primary reason for withdrawal given by director and participant, by ethnic group and type of program: all years combined—continued

Director's and participant's reason	Associate degree				Diploma				Baccalaureate			
	White		Not white		White		Not white		White		Not white	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
To enter other nursing program:												
Director	116	2.8	12	2.4	111	2.7	5	2.2	201	5.2	9	2.6
Participant	117	3.6	14	3.8	92	2.8	5	3.1	196	6.0	9	3.2
Total:												
Director	4,207	100.0	495	100.0	4,086	100.0	228	100.0	3,862	100.0	343	100.0
Participant	3,225	100.0	367	100.0	3,240	100.0	160	100.0	3,294	100.0	285	100.0

[1] Excludes unknown and "other" reason by director or participant, ethnic group unknown, and participants who did not return a withdrawal questionnaire.

Table 29.—Primary reason for withdrawal given by director and participant, by ethnic group and type of program: all years combined—continued

ector's and participant's reason	Associate degree				Diploma				Baccalaureate			
	White		Not white		White		Not white		White		Not white	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
nter other nursing program:												
rector	116	2.8	12	2.4	111	2.7	5	2.2	201	5.2	9	2.6
rticipant	117	3.6	14	3.8	92	2.8	5	3.1	196	6.0	9	3.2
:												
rector	4,207	100.0	495	100.0	4,086	100.0	228	100.0	3,862	100.0	343	100.0
rticipant	3,225	100.0	367	100.0	3,240	100.0	160	100.0	3,294	100.0	285	100.0

cludes unknown and "other" reason by director or participant, ethnic group unknown, and participants who did not return a withdrawal questionnaire.

Table 30.—Primary reason for withdrawal given by director and participant, by family income at time of entrance, associate degree program: all years combined [1]

Director's and participant's reason	Below $5,000		$5,000–$9,999		$10,000–$14,999		$15,000 and over	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Scholastic:								
Director	567	53.8	1,009	52.6	474	50.8	179	49.0
Participant	236	30.6	409	27.2	210	29.1	82	28.3
No longer interested in nursing:								
Director	135	12.8	283	14.8	141	15.1	60	16.4
Participant	105	13.6	292	19.4	128	17.7	63	21.7
Unsuited for nursing:								
Director	55	5.2	72	3.8	34	3.6	14	3.8
Participant	42	5.4	86	5.7	39	5.4	13	4.5
Marriage/pregnancy:								
Director	72	6.8	154	8.0	77	8.3	36	9.9
Participant	103	13.3	226	15.0	111	15.4	61	21.0
Personal/family problems:								
Director	130	12.3	231	12.0	115	12.3	47	12.9
Participant	133	17.2	253	16.8	115	15.9	47	16.2
Financial:								
Director	19	1.8	22	1.1	8	0.9	6	1.6
Participant	79	10.2	94	6.3	29	4.0	3	1.0
Illness:								
Director	48	4.6	96	5.0	53	5.7	8	2.2
Participant	43	5.6	98	6.5	59	8.2	7	2.4
To enter other nursing program:								
Director	28	2.7	51	2.7	31	3.3	15	4.1
Participant	31	4.0	45	3.0	31	4.3	14	4.8
Total:								
Director	1,054	100.0	1,918	100.0	933	100.0	365	100.0
Participant	772	100.0	1,503	100.0	722	100.0	290	100.0

[1] Excludes unknown and "other" reason by director or participant, family income unknown, and participants who did not return a withdrawal questionnaire.

Table 31.—Primary reason for withdrawal given by director and participant, by family income at time of entrance, baccalaureate program: all years combined [1]

Director's and participant's reason	Below $5,000		$5,000–$9,999		$10,000–$14,999		$15,000 and over	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Scholastic:								
Director	223	33.9	494	32.1	287	28.7	128	24.1
Participant	125	22.0	276	20.7	169	19.7	76	17.1
No longer interested in nursing:								
Director	245	37.2	632	41.1	448	44.8	263	49.5
Participant	164	28.8	479	35.9	351	40.8	202	45.4
Unsuited for nursing:								
Director	25	3.8	31	2.0	34	3.4	8	1.5
Participant	28	4.9	39	2.9	29	3.4	20	4.5
Marriage/pregnancy:								
Director	51	7.8	164	10.7	95	9.5	49	9.2
Participant	79	13.9	248	18.6	134	15.6	63	14.2
Personal/family problems:								
Director	48	7.3	82	5.3	36	3.6	20	3.8
Participant	67	11.8	119	8.9	79	9.2	25	5.6
Financial:								
Director	12	1.8	18	1.2	14	1.4	4	0.8
Participant	56	9.8	70	5.2	22	2.6	10	2.2
Illness:								
Director	28	4.3	52	3.4	30	3.0	21	4.0
Participant	24	4.2	31	2.3	28	3.3	19	4.3
To enter other nursing program:								
Director	26	4.0	65	4.2	55	5.5	38	7.2
Participant	26	4.6	74	5.5	48	5.6	30	6.7
Total:								
Director	658	100.0	1,538	100.0	999	100.0	531	100.0
Participant	569	100.0	1,336	100.0	860	100.0	445	100.0

[1] Excludes unknown and "other" reason by director or participant, family income unknown, and participants who did not return a withdrawal questionnaire.

Table 32.—Primary reason for withdrawal given by director and participant, by family income at time of entrance, diploma program: all years combined [1]

Director's and participant's reason	Below $5,000		$5,000–$9,999		$10,000–$14,999		$15,000 and over	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Scholastic:								
Director	460	43.5	782	42.6	306	40.8	97	38.3
Participant	263	32.2	449	30.4	169	28.3	52	27.4
No longer interested in nursing:								
Director	187	17.7	398	21.7	158	21.1	64	25.3
Participant	142	17.4	283	19.1	127	21.3	47	24.7
Unsuited for nursing:								
Director	67	6.3	68	3.7	44	5.9	18	7.1
Participant	49	6.0	75	5.1	43	7.2	7	3.7
Marriage/pregnancy:								
Director	193	18.3	329	17.9	145	19.3	31	12.3
Participant	185	22.6	336	22.7	145	24.3	31	16.3
Personal/family problems:								
Director	77	7.3	110	6.0	45	6.0	17	6.7
Participant	94	11.5	192	13.0	61	10.2	26	13.7
Financial:								
Director	7	0.7	5	0.3	1	0.1	1	0.4
Participant	28	3.4	30	2.0	2	0.3	1	0.5
Illness:								
Director	41	3.9	100	5.4	30	4.0	13	5.1
Participant	37	4.5	77	5.2	31	5.2	16	8.4
To enter other nursing program:								
Director	25	2.4	45	2.4	21	2.8	12	4.7
Participant	20	2.4	37	2.5	19	3.2	10	5.3
Total:								
Director	1,057	100.0	1,837	100.0	750	100.0	253	100.0
Participant	818	100.0	1,479	100.0	597	100.0	190	100.0

[1] Excludes unknown and "other" reason by director or participant, family income unknown, and participants who did not return a withdrawal questionnaire.

Participants who indicated personal/family problems as reasons for withdrawal were proportionally higher among students at the lowest income level than in other income categories, 17.2 percent and 11.8 percent respectively for associate degree and baccalaureate; but for diploma participants, the same reason was proportionally highest, 13.7 percent at the opposite end of the income scale.

As might be anticipated, students who had been in the bottom half of their high school classes withdrew from nursing schools for scholastic reasons more frequently than students whose high school standing had been in the top half (table 33). Directors gave scholas-

tic reasons for withdrawal for 48.8 percent of the associate degree participants who had been in the top half of their high school classes, 40.0 percent of diploma and 27.9 percent of baccalaureate. The same reason was given by directors for two-thirds of the associate degree participants who had been in the bottom half of their high school classes, 58.1 percent of diploma, and 44.8 percent of the baccalaureate. Participants cited scholastic reasons for withdrawal less frequently, but with the same pattern. Those who had been in the bottom half of their high school classes who indicated they had left nursing school for scholastic reasons accounted for 41.6 percent of the associate degree, 45.9 percent of the diploma, and 31.7 percent of the baccalaureate respondents. Although scholastic reasons for withdrawal from nursing differed proportionally in relation to high school standing, it should be noted that even among those who were in the top half of their high school classes, "scholastic reasons" was the predominant reason for withdrawal for associate degree and diploma participants as indicated by both director and participants. "No longer interested in nursing" was the most frequently cited reason given by directors and participants for withdrawal for baccalaureate participants whose high school averages had been in the top half of their classes.

Comparison of Reason for Withdrawal—Director and Participant

Tables 34, 35, and 36 show an effort to determine how many directors' and participants' reasons occurred in the same or different categories. To be included in this table, a respondent would have had to return the withdrawal questionnaire, checked one of the listed options as reason for withdrawal, and, in addition, the director would have had to supply one of the checklist reasons for the respondent. For example, if a withdrawal questionnaire was returned with a reason written in by the respondent instead of one on the checklist, this individual's response would not be included in the table, or, even if the respondent cited a checklist reason, but the director had categorized this person as reason "unknown," then that individual's response also would be eliminated. Within these restrictions, which reduces the total number of responses tallied, there are some similarities and some differences in the two reasons for withdrawal. For all three tables there was more agreement between directors and participants concerning scholastic reasons than for any other reason for withdrawal.

Among the 945 associate degree participants who said they had withdrawn for scholastic reasons, 818 directors or 86.6 percent gave

Table 33.—Primary reason for withdrawal given by director and participant, by high school academic standing and type of program: all years combined [1]

Director's and participant's reason	Associate degree				Diploma				Baccalaureate			
	Top half		Bottom half		Top half		Bottom half		Top half		Bottom half	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Scholastic:												
Director	1,638	48.8	656	66.6	1,417	40.0	344	58.1	1,002	27.9	200	44.
Participant	635	24.8	311	41.6	780	27.8	215	45.9	554	18.0	118	31.
No longer interested in nursing:												
Director	551	16.4	98	9.9	784	22.1	80	13.5	1,585	44.1	152	34.
Participant	502	19.6	115	15.4	587	20.9	50	10.7	1,210	39.4	86	23.
Unsuited for nursing:												
Director	151	4.5	31	3.1	180	5.1	31	5.2	89	2.5	13	2.
Participant	141	5.5	36	4.8	149	5.3	34	7.3	105	3.4	19	5.
Marriage/pregnancy:												
Director	288	8.6	55	5.6	655	18.5	66	11.1	375	10.4	23	5.
Participant	425	16.6	86	11.5	658	23.4	71	15.2	524	17.1	49	13.
Personal/family problems:												
Director	409	12.2	89	9.0	223	6.3	36	6.1	178	5.0	24	5.
Participant	438	17.1	93	12.4	346	12.3	56	12.0	272	8.9	41	11.
Financial:												
Director	45	1.3	12	1.2	11	0.3	5	0.8	47	1.3	3	0.
Participant	152	5.9	52	7.0	52	1.9	13	2.8	137	4.5	25	6.
Illness:												
Director	176	5.2	22	2.2	181	5.1	14	2.4	129	3.6	14	3.
Participant	170	6.7	27	3.6	151	5.4	22	4.7	100	3.2	11	3.

33.—Primary reason for withdrawal given by director and participant, by high school academic standing and type of program: all years combined [1]

r's and participant's reason	Associate degree				Diploma				Baccalaureate			
	Top half		Bottom half		Top half		Bottom half		Top half		Bottom half	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
c:												
r	1,638	48.8	656	66.6	1,417	40.0	344	58.1	1,002	27.9	200	44.8
ant	635	24.8	311	41.6	780	27.8	215	45.9	554	18.0	118	31.7
r interested in ng:												
r	551	16.4	98	9.9	784	22.1	80	13.5	1,585	44.1	152	34.1
ant	502	19.6	115	15.4	587	20.9	50	10.7	1,210	39.4	86	23.1
for nursing:												
r	151	4.5	31	3.1	180	5.1	31	5.2	89	2.5	13	2.9
ant	141	5.5	36	4.8	149	5.3	34	7.3	105	3.4	19	5.1
pregnancy:												
r	288	8.6	55	5.6	655	18.5	66	11.1	375	10.4	23	5.2
ant	425	16.6	86	11.5	658	23.4	71	15.2	524	17.1	49	13.2
family problems:												
r	409	12.2	89	9.0	223	6.3	36	6.1	178	5.0	24	5.4
ant	438	17.1	93	12.4	346	12.3	56	12.0	272	8.9	41	11.0
:												
r	45	1.3	12	1.2	11	0.3	5	0.8	47	1.3	3	0.7
ant	152	5.9	52	7.0	52	1.9	13	2.8	137	4.5	25	6.7
r	176	5.2	22	2.2	181	5.1	14	2.4	129	3.6	14	3.1
ant	170	6.7	27	3.6	151	5.4	22	4.7	100	3.2	11	3.0

Table 33.—Primary reason for withdrawal given by director and participant, by high school academic standing and type of pr all years combined—continued

Director's and participant's reason	Associate degree				Diploma				Baccalaureate			
	Top half		Bottom half		Top half		Bottom half		Top half		Bottom h	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	
To enter other nursing program:												
Director	97	2.9	22	2.2	93	2.6	16	2.7	189	5.3	17	
Participant	95	3.7	28	3.7	85	3.0	7	1.5	171	5.6	23	
Total:												
Director	3,355	100.0	985	100.0	3,544	100.0	592	100.0	3,594	100.0	446	
Participant	2,558	100.0	748	100.0	2,808	100.0	468	100.0	3,073	100.0	372	

[1] Excludes unknown and "other" reason by director or participant, high school academic standing unknown, and participants who did not return a withdrawal questionnaire.

ble 33.—Primary reason for withdrawal given by director and participant, by high school academic standing and type of program: all years combined—continued

and participant's reason	Associate degree				Diploma				Baccalaureate			
	Top half		Bottom half		Top half		Bottom half		Top half		Bottom half	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
her nursing m:												
----------	97	2.9	22	2.2	93	2.6	16	2.7	189	5.3	17	3.8
nt ----------	95	3.7	28	3.7	85	3.0	7	1.5	171	5.6	23	6.2
----------	3,355	100.0	985	100.0	3,544	100.0	592	100.0	3,594	100.0	446	100.0
nt ----------	2,558	100.0	748	100.0	2,808	100.0	468	100.0	3,073	100.0	372	100.0

nknown and "other" reason by director or participant, high school academic standing unknown, and participants who did not return a withdrawal questionnaire.

Table 34.—Primary reason for withdrawal given by director and participant, associate degree program: all years combined [1]

Director's reason	Participant's reason: Scholastic No.	Pct.	No longer interested in nursing No.	Pct.	Unsuited for nursing No.	Pct.	Marriage/ pregnancy No.	Pct.	Personal/ family problems No.	Pct.	Financial No.	Pct.	Illness No.	Pct.	To enter other nursing program No.	Pct.	Total No.	Pct.
Scholastic	818	86.6	243	39.8	106	58.2	156	32.3	187	36.7	97	49.7	52	26.7	54	48.2	1,713	53.
No longer interested in nursing	43	4.6	276	45.2	14	7.7	33	6.8	70	13.7	14	7.2	12	6.2	10	8.9	472	14.
Unsuited for nursing	19	2.0	15	2.5	44	24.2	4	0.8	21	4.1	8	4.1	14	7.2	4	3.6	129	4.
Marriage/pregnancy	7	0.7	14	2.3	1	0.5	215	44.5	16	3.1	9	4.6	4	2.0	2	1.8	268	8.
Personal/family problems	22	2.3	41	6.7	5	2.7	57	11.8	176	34.5	41	21.0	20	10.3	9	8.0	371	11.
Financial	4	0.4	4	0.7	0	0	3	0.6	11	2.2	15	7.7	0	0	2	1.8	39	1.
Illness	5	0.5	11	1.8	8	4.4	11	2.3	22	4.3	6	3.1	90	46.2	1	0.9	154	4.
To enter other nursing program	27	2.9	6	1.0	4	2.2	4	0.8	7	1.4	5	2.6	3	1.5	30	26.8	86	2.
Total	945	100.0	610	100.0	182	100.0	483	100.0	510	100.0	195	100.0	195	100.0	112	100.0	3,232	100.

[1] Excludes unknown and "other" reasons by director or participants, and withdrawals who did not return a questionnaire.

Table 34.—Primary reason for withdrawal given by director and participant, associate degree program: all years combined [1]

Director's reason	Participant's reason																	
	Scholastic		No longer interested in nursing		Unsuited for nursing		Marriage/ pregnancy		Personal/ family problems		Financial		Illness		To enter other nursing program		Total	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
astic	818	86.6	243	39.8	106	58.2	156	32.3	187	36.7	97	49.7	52	26.7	54	48.2	1,713	53.0
nger interested in sing	43	4.6	276	45.2	14	7.7	33	6.8	70	13.7	14	7.2	12	6.2	10	8.9	472	14.6
ted for nursing	19	2.0	15	2.5	44	24.2	4	0.8	21	4.1	8	4.1	14	7.2	4	3.6	129	4.0
age/pregnancy	7	0.7	14	2.3	1	0.5	215	44.5	16	3.1	9	4.6	4	2.0	2	1.8	268	8.3
nal/family problems	22	2.3	41	6.7	5	2.7	57	11.8	176	34.5	41	21.0	20	10.3	9	8.0	371	11.5
cial	4	0.4	4	0.7	0	0	3	0.6	11	2.2	15	7.7	0	0	2	1.8	39	1.2
	5	0.5	11	1.8	8	4.4	11	2.3	22	4.3	6	3.1	90	46.2	1	0.9	154	4.8
ter other nursing gram	27	2.9	6	1.0	4	2.2	4	0.8	7	1.4	5	2.6	3	1.5	30	26.8	86	2.7
Total	945	100.0	610	100.0	182	100.0	483	100.0	510	100.0	195	100.0	195	100.0	112	100.0	3,232	100.0

[1] ludes unknown and "other" reasons by director or participants, and withdrawals who did not return a questionnaire.

Table 35.—Primary reason for withdrawal given by director and participant, baccalaureate program: all years combined [1]

Director's reason	Participant's reason																	
	Scholastic		No longer interested in nursing		Unsuited for nursing		Marriage/ pregnancy		Personal/ family problems		Financial		Illness		To enter other nursing program		Total	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pc
Scholastic	362	70.0	157	16.1	32	32.0	84	20.6	57	27.4	37	36.3	11	14.9	43	33.6	783	3
No longer interested in nursing	114	22.0	703	71.9	33	33.0	71	17.4	65	31.3	23	22.5	19	25.7	20	15.6	1,048	4
Unsuited for nursing	9	1.7	24	2.5	17	17.0	7	1.7	5	2.4	2	2.0	1	1.4	4	3.1	69	
Marriage/pregnancy	6	1.2	26	2.7	3	3.0	184	45.1	10	4.8	7	6.9	6	8.1	3	2.3	245	
Personal/family problems	11	2.1	25	2.6	3	3.0	31	7.6	26	12.5	5	4.9	5	6.8	7	5.5	113	
Financial	2	0.4	5	0.5	0	0	6	1.5	8	3.8	10	9.8	0	0	5	3.9	36	
Illness	3	0.6	11	1.1	7	7.0	10	2.5	27	12.9	5	4.9	31	41.9	3	2.3	97	
To enter other nursing program	10	1.9	26	2.7	5	5.0	15	3.7	10	4.8	13	12.7	1	1.4	43	33.6	123	
Total	517	100.0	977	100.0	100	100.0	408	100.0	208	100.0	102	100.0	74	100.0	128	100.0	2,514	10

[1] Excludes unknown and "other" reasons by director or participants, and withdrawals who did not return a questionnaire.

Table 35.—Primary reason for withdrawal given by director and participant, baccalaureate program: all years combined [1]

Director's reason	Participant's reason																	
	Scholastic		No longer interested in nursing		Unsuited for nursing		Marriage/ pregnancy		Personal/ family problems		Financial		Illness		To enter other nursing program		Total	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
cholastic	362	70.0	157	16.1	32	32.0	84	20.6	57	27.4	37	36.3	11	14.9	43	33.6	783	31.1
o longer interested in nursing	114	22.0	703	71.9	33	33.0	71	17.4	65	31.3	23	22.5	19	25.7	20	15.6	1,048	41.7
nsuited for nursing	9	1.7	24	2.5	17	17.0	7	1.7	5	2.4	2	2.0	1	1.4	4	3.1	69	2.7
arriage/pregnancy	6	1.2	26	2.7	3	3.0	184	45.1	10	4.8	7	6.9	6	8.1	3	2.3	245	9.7
ersonal/family problems	11	2.1	25	2.6	3	3.0	31	7.6	26	12.5	5	4.9	5	6.8	7	5.5	113	4.5
nancial	2	0.4	5	0.5	0	0	6	1.5	8	3.8	10	9.8	0	0	5	3.9	36	1.4
ness	3	0.6	11	1.1	7	7.0	10	2.5	27	12.9	5	4.9	31	41.9	3	2.3	97	3.9
o enter other nursing program	10	1.9	26	2.7	5	5.0	15	3.7	10	4.8	13	12.7	1	1.4	43	33.6	123	4.9
Total	517	100.0	977	100.0	100	100.0	408	100.0	208	100.0	102	100.0	74	100.0	128	100.0	2,514	100.0

[1] Excludes unknown and "other" reasons by director or participants, and withdrawals who did not return a questionnaire.

Table 36.—Primary reason for withdrawal given by director and participant, diploma programs: all years combined [1]

Director's reason	Participant's reason: Scholastic No.	Pct.	No longer interested in nursing No.	Pct.	Unsuited for nursing No.	Pct.	Marriage/ pregnancy No.	Pct.	Personal/ family problems No.	Pct.	Financial No.	Pct.	Illness No.	Pct.	To enter other nursing program No.	Pct.	Total No.	Pct.
Scholastic	889	89.3	156	26.1	107	58.8	47	6.6	93	24.9	24	38.7	39	22.4	21	23.6	1,376	43
No longer interested in nursing	30	3.0	347	58.0	12	6.6	90	12.7	110	29.4	14	22.6	22	12.6	10	11.2	635	19
Unsuited for nursing	34	3.4	18	3.0	47	25.8	12	1.7	26	7.0	3	4.8	7	4.0	7	7.9	154	4
Marriage/pregnancy	14	1.4	26	4.3	3	1.6	498	70.2	32	8.6	6	9.7	9	5.2	2	2.2	590	18
Personal/family problems	12	1.2	29	4.8	7	3.8	45	6.3	62	16.6	7	11.3	7	4.0	7	7.9	176	5
Financial	1	0.1	0	0	0	0	0	0	1	0.3	7	11.3	2	1.1	0	0	11	0
Illness	3	0.3	17	2.8	4	2.2	6	0.8	40	10.7	1	1.6	88	50.6	0	0	159	5
To enter other nursing program	13	1.3	5	0.8	2	1.1	11	1.6	10	2.7	0	0	0	0	42	47.2	83	2
Total	996	100.0	598	100.0	182	100.0	709	100.0	374	100.0	62	100.0	174	100.0	89	100.0	3,184	100

[1] Excludes unknown and "other" reasons by director or participants, and withdrawals who did not return a questionnaire.

Table 36.—Primary reason for withdrawal given by director and participant, diploma programs: all years combined [1]

Director's reason	Participant's reason																	
	Scholastic		No longer interested in nursing		Unsuited for nursing		Marriage/ pregnancy		Personal/ family problems		Financial		Illness		To enter other nursing program		Total	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
stic	889	89.3	156	26.1	107	58.8	47	6.6	93	24.9	24	38.7	39	22.4	21	23.6	1,376	43.2
ger interested in ng	30	3.0	347	58.0	12	6.6	90	12.7	110	29.4	14	22.6	22	12.6	10	11.2	635	19.9
ed for nursing	34	3.4	18	3.0	47	25.8	12	1.7	26	7.0	3	4.8	7	4.0	7	7.9	154	4.8
ge/pregnancy	14	1.4	26	4.3	3	1.6	498	70.2	32	8.6	6	9.7	9	5.2	2	2.2	590	18.5
al/family problems	12	1.2	29	4.8	7	3.8	45	6.3	62	16.6	7	11.3	7	4.0	7	7.9	176	5.5
al	1	0.1	0	0	0	0	0	0	1	0.3	7	11.3	2	1.1	0	0	11	0.3
	3	0.3	17	2.8	4	2.2	6	0.8	40	10.7	1	1.6	88	50.6	0	0	159	5.0
er other nursing ram	13	1.3	5	0.8	2	1.1	11	1.6	10	2.7	0	0	0	0	42	47.2	83	2.6
tal	996	100.0	598	100.0	182	100.0	709	100.0	374	100.0	62	100.0	174	100.0	89	100.0	3,184	100.0

[1] Includes unknown and "other" reasons by director or participants, and withdrawals who did not return a questionnaire.

the same response; among the 996 diploma withdrawals for scholastic reasons, 889 or 89.3 percent of directors cited this reason; and for the 517 baccalaureate degree respondents, 362 or 70 percent of directors also indicated scholastic reason for withdrawal. The tables also indicate the differences between directors' and participants' perceptions of financial reasons for withdrawal, the area which elicited least correspondence in responses. Of the 195 associate degree respondents giving financial reasons for withdrawal, only 15 directors cited the same reason; for 62 diploma participants' responses in this category, 7 directors gave the same response; and for 10 of the 102 baccalaureate participants, directors had the same response. Examination of diagonal percentages of the tables would imply that when directors and participants differed in response, directors were more likely to be giving scholastic failure as a reason for withdrawal.

Summary

In examining reasons for withdrawal from nursing school it is apparent that among baccalaureate programs and, to a lesser extent among associate degree programs, directors of the nursing programs were unaware of the reasons why students left nursing school. The implication to be drawn is that a final interview or exit evaluation was not a part of the usual school procedure or, if done, was not a part of the nursing department's records. It is reasonable to assume that withdrawal from nursing cannot be understood unless reasons for withdrawal are examined more vigorously. Reasons for withdrawal and patterns relating to these reasons described in this study are at best only broad directionals, which point to areas warranting deeper investigation. It is also reasonable to assume that identifying the one primary reason for withdrawal is probably difficult.

Among respondents for whom one primary reason was identified in this study, scholastic failure was the predominant reason for withdrawal of associate degree and diploma students. "No longer interested in nursing as a career," which includes all who remained in school but changed their major area of study, was the most frequently cited reason for baccalaureate withdrawals from nursing. These reasons were true for both directors' and participants' responses, although proportions differed, with respondents usually citing scholastic reasons less frequently. Participants' responses in the categories marriage, personal/family problems, and financial were usually proportionally higher than directors' responses in these categories. The year of withdrawal did not substantially change the primary reason for withdrawal of associate degree

students, which remained scholastic failure. However, among the diploma and baccalaureate groups during the later years in school, marriage and/or pregnancy assumed greater importance as the reason for withdrawal.

The data indicate that married and formerly married students withdrew more frequently because of personal/family problems and financial reasons than their single cohorts. Students who belonged to ethnic groups other than white withdrew for scholastic reasons in greater proportions than white students. Although the proportions were small, nonwhite students also had more financial problems which led to withdrawal. Those who came from the lowest end of the family income scale in this study withdrew from nursing for scholastic reasons more frequently than did those whose families were in better financial circumstances. Students in the low income group cited financial reasons more frequently than their other classmates who withdrew and in the associate degree and baccalaureate programs, they also often left school because of family/personal problems.

Leaving nursing school because of scholastic problems was the predominant reason given for associate degree and diploma groups by students and directors, regardless of high school academic standing; however, proportions differed considerably between those who had been in the top or bottom half of their high school classes. On the other hand, baccalaureate participants who had been in the top half of their high school classes left nursing school most frequently because they had lost interest in nursing, while those who had been in the bottom half of their high school classes left for scholastic reasons.

Although each variable—marital status, ethnic group, family income and high school standing—has been examined separately by reason for withdrawal, there is no doubt that there are interrelationships among the variables. Descriptively, the students in this study who appeared to withdraw from nursing school for scholastic reasons were single, belonged to an ethnic group other than white, came from the lowest income level used in this study, and had been in the bottom half of their high school classes.

Chapter VI

ACTIVITIES OF WITHDRAWALS AFTER LEAVING NURSING SCHOOL

When directors of participating programs returned lists of students which verified graduation date and indicated those who had withdrawn, withdrawal questionnaires were sent to the appropriate participants. That is, those who were designated as having withdrawn were sent questionnaires at about the time they would have been graduating if they had remained in the nursing programs. The procedure for mailing and following questionnaires was the same as used throughout the study. The initial questionnaire request was sent with an explanatory letter and return envelope to individuals at their home addresses. If no response was forthcoming, followup procedures were instituted at 3-week intervals, at first by post card, then another letter with the questionnaire, and third, a certified letter with questionnaire.

Responses to the withdrawal questionnaire varied by year of the study and type of program and did not reach the level of response of other questionnaires in this study (appendix B, table B–2). It is possible that those who withdrew from nursing were less concerned about responding to the questionnaire but, in general, questionnaires were undeliverable by the post office because of inaccurate addresses. An address had been obtained from each participant upon entrance to nursing school and the start of the study; however, withdrawal questionnaires were not sent until some time later. If the address was then inaccurate, there was no means of obtaining further information since schools of nursing usually did not have forwarding addresses for students who had withdrawn. Response rates for the withdrawal questionnaire ranged from 79.4 percent for the diploma group to 63.5 percent for the baccalaureate group. Except in instances which are specifically explained otherwise, the totals in the following tables reflect all those who returned the withdrawal questionnaire.

This chapter describes responses of those who withdrew in terms of: year of withdrawal, reenrollment in another nursing school,

educational and occupational activities since leaving nursing school, and marital status.

Students who withdrew from nursing school usually did so in the first year: 76.3 percent of associate degree, 67.5 percent of diploma, and 47.5 percent of baccalaureate (table 37). More than a fifth of the participants withdrew from associate degree programs during the second year, about a fourth of the diploma, and over a third of the baccalaureate. Smaller proportions left in the final year. A few associate degree programs, mostly in the first group of the study (entered in the fall of 1962), were more than 2 years in length.

Continued Interest in Nursing

Some of the participants in this study who withdrew from nursing schools before finishing the program, and who responded to the questionnaire sent to those who withdrew, appeared to continue their interest in nursing.

For instance, some participants who withdrew reenrolled in another nursing program: 16.7 of the withdrawals from associate degree programs, 24.3 percent of the diploma, and 18.7 of baccalaureate (table 38).

Table 37.—Year of leaving nursing program, by type of program: all years combined

Year of withdrawal	Associate degree		Diploma		Baccalaureate	
	No.	Pct.	No.	Pct.	No.	Pct.
First	3,018	76.3	2,511	67.5	1,876	47.5
Second	858	21.7	913	24.5	1,385	35.1
Third [1]	12	0.3	241	6.5	502	12.7
Fourth	—	—	—	—	94	2.4
Ambiguous or no response	70	1.8	55	1.5	89	2.3
Total	3,958	100.0	3,720	100.0	3,946	100.0

[1] Some associate degree programs were more than 2 years in length.

Table 38.—Reenrolled in nursing program, by type of original program: all years combined

Enrollment	Associate degree		Diploma		Baccalaureate	
	No.	Pct.	No.	Pct.	No.	Pct.
Reenrolled	662	16.7	903	24.3	739	18.7
Did not reenroll	3,129	79.1	2,707	72.6	3,068	77.7
Ambiguous or no response	167	4.2	110	3.0	139	3.5
Total	3,958	100.0	3,720	100.0	3,946	100.0

Three items on the questionnaire were related to reenrollment: the first asked if the respondent had reenrolled, the second, the type of nursing program, and the third, current status in that program. It will be recalled that in this study "graduated" has been defined as completion of the same type of nursing program in which the participant was enrolled at the time the study began and "withdrawal" includes all those who had completely severed ties with nursing schools and those who had changed from one type of nursing program to another type; i.e., from diploma to baccalaureate.

If all withdrawals who returned to nursing school, noted in the first row of table 38, are added together, a total of 2,304 individuals reentered nursing schools. Of these, 2,133 responded to all the items on the questionnaire referring to reenrollment in nursing school; their responses are described in table 39. Most of those who returned to nursing school had enrolled in practical nursing programs, 677, followed in frequency by those who decided upon a diploma program, 650 of the withdrawals. A good many of those who entered practical nursing programs had graduated, 65.4 percent, by the time they responded to the withdrawal questionnaire. The lower proportions graduating from other types of nursing programs are related no doubt to their length, and also because some of those who reentered nursing may not have done so immediately after withdrawal. Thirteen and five-tenths percent of those who reenrolled in nursing school withdrew, presumably for the second time. Proportionally, those who went into baccalaureate programs had the highest second time withdrawal rate: 29.5 percent.

Another item on the withdrawal questionnaire asked respondents if they would like to return to nursing school. To this inquiry 42.9 percent of the associate degree, 33.6 percent of the diploma, and 27.1 percent of the baccalaureate withdrawals replied in the affirmative.

Table 39.—For those who reenrolled in nursing, by type of subsequent program and status in that program [1]

Program of reenrollment	Status in subsequent program							
	Graduated		Still enrolled		Withdrew		Total	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Practical nursing	443	65.4	180	26.6	54	8.0	677	100.0
Associate degree	181	30.2	332	55.4	86	14.4	599	100.0
Diploma	143	22.0	420	64.6	87	13.4	650	100.0
Baccalaureate	11	5.3	135	65.2	61	29.5	207	100.0
Total	778	36.5	1,067	50.0	288	13.5	2,133	100.0

[1] Includes only those who reenrolled and responded to all items concerning reenrollment.

combined

Return to nursing	Associate degree		Diploma		Baccalaureate	
	No.	Pct.	No.	Pct.	No.	Pct.
Would like to return	1,697	42.9	1,249	33.6	1,069	27.1
Would not return	1,341	33.9	1,383	37.2	1,926	48.8
Already reenrolled	662	16.7	903	24.3	739	18.7
Undecided or no response	258	6.5	185	5.0	212	5.4
Total	3,958	100.0	3,720	100.0	3,946	100.0

Table 41.—Main reason for not having returned to nursing school, by type of program: all years combined

Reason	Associate degree		Diploma		Baccalaureate	
	No.	Pct.	No.	Pct.	No.	Pct.
Scholastic	187	11.0	52	4.2	73	6.8
Financial	416	24.5	303	24.2	275	25.7
Financial and another reason	161	9.5	105	8.4	86	8.0
Marriage and home responsibilities	580	34.2	573	45.9	432	40.4
Health	69	4.1	27	2.2	24	2.3
Personal	77	4.5	55	4.4	44	4.1
Location of nursing school	20	1.2	15	1.2	27	2.5
Other reason	135	8.0	82	6.6	76	7.1
Ambiguous or no response	52	3.1	37	3.0	32	3.0
Total [1]	1,697	100.0	1,249	100.0	1,069	100.0

[1] Includes only those who would like to return to nursing school as given in table 34.

These are in addition to those who indicated they had already reenrolled (table 40). Respondents who indicated they would like to return to nursing school but had not yet done so were asked to give one main reason for not having continued in a nursing education program. A checklist of five options followed this item. Responses to this item, especially those written in by respondents, made further categorization advisable. Table 41 includes only those who expressed a desire to return to nursing school.

The predominant situations which precluded return to nursing school were marriage and home responsibilities cited by 34.2 percent of the associate degree, 45.9 percent of the diploma and 40.4 percent of the baccalaureate respondents. The second most frequently mentioned reason was "financial circumstances" given by about a fourth of each group. Also, financial reasons appeared coupled with another reason often enough to be tabulated sepa-

rately, and ranged from 8.0 percent to 9.5 percent for baccalaureate and associate degree participants respectively. Only small proportions, from 4.2 percent of the diploma to 11.0 percent of the associate degree, thought scholastic requirements were inhibiting them from returning to nursing school. The approximately 4 percent in each group who gave reasons categorized as "personal" were those who wrote in statements concerning their ages, or that they had lost confidence in themselves, or were fearful of another disappointment. Some felt they had previously been immature or had emotional or psychological problems.

Although their problems were now under control, these participants were reluctant to try to explain themselves if reentry interviews called for such information. Another few were serving in the armed forces at the time they responded to the questionnaire and would have to complete their tours of duty before decisions to return to nursing school could be made. Those counted in the category "location of nursing school" were usually participants who had changed their places of residence and/or had married, moved to another area and could not find a nursing school within a reasonable distance. Participants' other written reasons, which ranged from 6.6 percent of the diploma to 8 percent of the associate degree, dealt with one of three possibilities: shortcomings of nursing schools in general, problems in being readmitted to nursing school, or current enrollment in a nonnursing school. Some believed nursing schools did not concentrate enough on the patient care aspects of the curriculum; others thought nursing schools discriminated against certain groups and mentioned older students, married students, and racial and religious groups. Some respondents were having problems in having their credits evaluated for readmission. And a final few thought they would defer decision about reentry into nursing until they had completed the course of study they were now taking. The final category in table 41 contains a few respondents who gave no reason at all and some who gave several reasons, none of which appeared to be paramount.

Subsequent Nonnursing Education

Some participants who left nursing school continued their education in other fields. Those who continued in school were 38.0 percent of the associate degree, 33.1 percent of the diploma, and 60.9 percent of the baccalaureate (table 42). Enrollment in school as reported here includes all types of postsecondary education—occupationally oriented, speciality programs, and programs in junior or senior colleges. Of this group, major fields most often mentioned by the

Table 42.—Enrolled in other educational program since leaving nursing school, by type of nursing program: all years combined

Other educational program	Associate degree		Diploma		Baccalaureate	
	No.	Pct.	No.	Pct.	No.	Pct.
Enrolled	1,505	38.0	1,230	33.1	2,402	60.9
Did not enroll	2,213	55.9	2,233	60.0	1,304	33.0
Ambiguous or no response	240	6.1	257	6.9	240	6.1
Total	3,958	100.0	3,720	100.0	3,946	100.0

Table 43.—Major field of interest in other educational program, by type of nursing program: all years combined

Major	Associate degree		Diploma		Baccalaureate	
	No.	Pct.	No.	Pct.	No.	Pct.
Prenursing	44	2.9	31	2.5	34	1.4
Health related field	224	14.9	221	18.0	302	12.6
Education	242	16.1	184	15.0	635	26.4
Social sciences	184	12.2	98	8.0	482	20.1
Physical or biological sciences	77	5.1	51	4.1	131	5.5
Business	279	18.5	343	27.9	267	11.1
Liberal arts	372	24.7	214	17.4	491	20.4
Other area	69	4.6	73	5.9	48	2.0
Ambiguous or no response	14	0.9	15	1.2	12	0.5
Total [1]	1,505	100.0	1,230	100.0	2,402	100.0

[1] Includes only those enrolled in other educational program since leaving nursing school.

associate degree group were liberal arts, 24.7 percent, or business, 18.5 percent; by the diploma, business, 27.9 percent or health-related field, 18.0 percent; and by the baccalaureate, education, 26.4 percent, and social sciences or liberal arts, both of which amounted to about a fifth (table 43). A small proportion from each group did not give a major, but said they were taking courses to prepare them for reentry into nursing school; these ranged to slightly over 1 percent of the baccalaureate to about 3 percent of the associate degree. Sustained interest in the health field is reflected in ranges of 12.6 percent of the baccalaureate to 18.0 percent of the diploma students who were studying in such areas as medical technology, speech, hearing, physical or occupational therapy; dietetics, medical library studies, or dental hygiene.

Marital and Occupational Status

A good proportion of participants gave marriage as their primary reason for withdrawal from nursing school (table 24, chapter V). No doubt, many of the former nursing students also had married since

withdrawing from nursing school. Table 44 presents marital status for withdrawals at the time they entered the nursing program and started with the study, and at the time they responded to the withdrawal questionnaire. For all three groups the change from single to married is quite marked.

Whereas most participants had been single at entrance, about half were married by the time they responded to the withdrawal questionnaire. At entrance to nursing school, 78.2 percent of the associate degree and over 96 percent of the diploma and baccalaureate had been single: at the later interval, 48.4 percent of the associate degree, 46 percent of the diploma, and 46.7 percent of the baccalaureate respondents remained single.

Simply as a point of contrast, similar data regarding graduates and their marital status are presented in table 45. Data in this table are derived from the questionnaire completed at entrance to nursing school and the questionnaire completed shortly before graduation. Among entrants who finished the program, 65.9 percent of the associate degree and 97 percent of the diploma and baccalaureate had been single at entrance to nursing school. By the time of graduation, 57.9 percent of the associate degree, 84.3 percent of the diploma, and 76.9 percent of the baccalaureate remained single. Although the proportion of nursing students who were married by the time they graduated was considerably smaller than the proportion of withdrawals who were married, data do indicate that a substantial group of nursing students married while students and remained in school to complete the nursing program.

More than half of those who had withdrawn from nursing school were employed full time and/or part time when they responded to the withdrawal questionnaire (table 46). Their occupations are described in table 47. For the most part, they were doing office or sales work: 48.2 percent of the associate degree, about half of the diploma, and 42.5 percent of the baccalaureate. Another 14.2 percent of the baccalaureate withdrawals had become school teachers. But, once again, it is apparent that even after withdrawing from nursing school and seeking employment, a good proportion of the total group maintained an interest in the health field. The first six categories of table 47 indicate those employed in nursing or some other aspect of the health care field: 48.7 percent of the associate degree, 47.3 percent of the diploma, and 39.4 percent of the baccalaureate. Before "registered nurse" was coded as an occupation, the questionnaire had to contain evidence that the respondent had been graduated from a registered nurse program. If participants said they were working as nurses or as registered nurses and there was no evidence of graduation from a nursing program, then the

Table 44.—Marital status of withdrawals at time of entrance and after withdrawing from nursing school, by type of program [1]

Marital status	Associate degree				Diploma				Baccalaureate			
	At entrance		After withdrawal		At entrance		After withdrawal		At entrance		After withdrawa	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Single	4,270	78.2	1,916	48.4	4,535	96.7	1,712	46.0	5,998	96.5	1,843	4
Married	919	16.8	1,821	46.0	109	2.3	1,888	50.8	123	2.0	1,998	5
Formerly married	243	4.5	203	5.1	21	0.4	68	1.8	55	0.9	76	
Religious and unknown	27	0.5	18	0.5	23	0.5	52	1.4	42	0.7	29	
Total	5,459	100.0	3,958	100.0	4,688	100.0	3,720	100.0	6,218	100.0	3,946	10

[1] Number at entrance includes all withdrawals; number after withdrawal includes those who returned withdrawal questionnaire.

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Table 45.—Marital status of graduates at time of entrance and at time of graduation, by type of program [1]

Marital status	Associate degree				Diploma				Baccalaureate			
	At entrance		At graduation		At entrance		At graduation		At entrance		At graduation	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Single	5,532	65.9	4,555	57.9	10,458	97.0	8,796	84.3	6,979	97.0	5,072	7
Married	2,341	27.9	2,766	35.1	197	1.8	1,542	14.8	120	1.7	1,436	2
Formerly married	440	5.2	482	6.1	57	0.5	60	0.6	27	0.4	36	
Religious and unknown	80	1.0	68	0.9	68	0.6	37	0.4	66	0.9	52	
Total	8,393	100.0	7,871	100.0	10,780	100.0	10,435	100.0	7,192	100.0	6,596	10

[1] Number at entrance includes all graduates; number at graduation includes all who returned questionnaire completed shortly before graduation.

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Table 44.—Marital status of withdrawals at time of entrance and after withdrawing from nursing school, by type of program [1]

Marital status	Associate degree				Diploma				Baccalaureate			
	At entrance		After withdrawal		At entrance		After withdrawal		At entrance		After withdrawal	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Single	4,270	78.2	1,916	48.4	4,535	96.7	1,712	46.0	5,998	96.5	1,843	46.7
Married	919	16.8	1,821	46.0	109	2.3	1,888	50.8	123	2.0	1,998	50.6
Formerly married	243	4.5	203	5.1	21	0.4	68	1.8	55	0.9	76	1.9
Religious and unknown	27	0.5	18	0.5	23	0.5	52	1.4	42	0.7	29	0.8
Total	5,459	100.0	3,958	100.0	4,688	100.0	3,720	100.0	6,218	100.0	3,946	100.0

[1] Number at entrance includes all withdrawals; number after withdrawal includes those who returned withdrawal questionnaire.

Table 45.—Marital status of graduates at time of entrance and at time of graduation, by type of program [1]

Marital status	Associate degree				Diploma				Baccalaureate			
	At entrance		At graduation		At entrance		At graduation		At entrance		At graduation	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Single	5,532	65.9	4,555	57.9	10,458	97.0	8,796	84.3	6,979	97.0	5,072	76.9
Married	2,341	27.9	2,766	35.1	197	1.8	1,542	14.8	120	1.7	1,436	21.8
Formerly married	440	5.2	482	6.1	57	0.5	60	0.6	27	0.4	36	0.5
Religious and unknown	80	1.0	68	0.9	68	0.6	37	0.4	66	0.9	52	0.8
Total	8,393	100.0	7,871	100.0	10,780	100.0	10,435	100.0	7,192	100.0	6,596	100.0

[1] Number at entrance includes all graduates; number at graduation includes all who returned questionnaire completed shortly before graduation.

Table 46.—Employment status of withdrawals, by type of nursing program: all years combined

Employment	Associate degree		Diploma		Baccalaureate	
	No.	Pct.	No.	Pct.	No.	Pct.
Employed	2,345	59.2	2,110	56.7	2,199	55.7
Not employed	1,453	36.7	1,463	39.3	1,590	40.3
Military service	16	0.4	14	0.4	5	0.1
Ambiguous or no response	144	3.6	133	3.6	152	3.9
Total	3,958	100.0	3,720	100.0	3,946	100.0

Table 47.—Occupation of withdrawals, by type of program: all years combined

Occupation	Associate degree		Diploma		Baccalaureate	
	No.	Pct.	No.	Pct.	No.	Pct.
Registered nurse	40	1.7	21	1.0	202	9.2
Licensed practical nurse [1]	249	10.6	260	12.3	103	4.7
Nursing auxiliary	458	19.5	305	14.5	193	8.8
Nursing level unknown	36	1.5	40	1.9	38	1.7
Health technician	164	7.0	182	8.6	182	8.3
Medical/clerical	198	8.4	190	9.0	148	6.7
School teacher	33	1.4	15	0.7	313	14.2
Social welfare work	25	1.1	11	0.5	80	3.6
Business and other	1,131	48.2	1,081	51.2	934	42.5
No response	11	0.5	5	0.2	6	0.3
Total [2]	2,345	100.0	2,110	100.0	2,199	100.0

[1] Some participants were LPN/LVN's before entering RN program.
[2] Includes only those employed as given in table 46.

code for "nursing level unknown" was used. No judgment was made if respondents indicated they were employed as LPN/LVN's, since many had been practical nurses before entering the registered nurse program. Written comments on the questionnaires indicated that some withdrawals, especially from diploma and baccalaureate programs, had been permitted to take the LPN/LVN licensing examination without attending a practical nursing school.

The nursing auxiliary category includes all those working as aides, orderlies, nursing assistants, psychiatric aides, and in similar positions. The health technician category includes those whose employment was in laboratory work, X-ray, or various other therapies; and medical clerical includes those doing office work in hospitals, health care organizations, or doctors' offices.

Summary

Most withdrawals from all three types of registered nurse programs take place during the first year of the program. However, withdrawal does occur, although with diminishing frequency, during any year of the program.

Those who withdrew showed continued interest in nursing. First, some reenrolled in a nursing program; second, many indicated they would like to return to nursing school; third, some were taking courses to prepare for reentry into a nursing program; and, finally, a good proportion were employed in nursing or health-related occupations. This continued interest was mitigated by the fact that more than 1 out of 10 of those who reenrolled withdrew for the second time. Marriage and home responsibilities or financial circumstances appeared to make the imminent return to nursing unlikely for those respondents who said they wished to return to nursing school but had not done so.

Changed educational goals were obvious for those who had continued their education with a nonnursing major. The highest proportion of these were among the baccalaureate withdrawals.

Although a good many students married and remained in nursing school until completing the program, the proportion of married respondents among the withdrawals was higher than the proportion of married respondents among the graduated.

Proportions of withdrawals among the associate degree and diploma participants who were employed in nursing and health related occupations at the time they answered the questionnaire were almost the same as those withdrawals who had gone into the business world. Among the baccalaureate withdrawals who were working, fewer were working in nursing and health work than in other types of work, but this disparity is offset by the higher proportions of baccalaureate withdrawals in such other service occupations as school teaching or social welfare work, categories which were negligible for the other two groups.

Chapter VII

DISCUSSION AND RECOMMENDATIONS

This report presents rates of graduation/withdrawal for three groups of nursing students in the three types of registered nurse programs. Certain biographical characteristics and institutional variables are described by graduation or withdrawal and type of nursing school. Reasons for withdrawal from the point of view of the director of the nursing program and the nursing respondents are given. Finally, some of the subsequent activities of respondents after withdrawal from nursing school are described.

The rates of graduation of students in this study appear to differ by type of nursing program, ranging from 53.6 percent (baccalaureate) to 69.7 percent (diploma). However, these proportions do not differ substantially from rates reported in other studies of nursing students when these are examined by type of program. The graduation rate among nursing students does appear, in general, to be somewhat higher than rates reported for other students in 2- and 4-year colleges. Students entering nursing programs also seem to differ biographically from norms reported for students in a national survey of 2- and 4-year colleges.

The statistical relationships between biographical variables and graduation/withdrawal rates differed among the three nursing programs. Probably the most noteworthy difference in biographical variables and graduation and withdrawal rates is among associate degree students: the older married students had higher rates of graduations than younger single students. This finding was reversed for diploma and baccalaureate students. Roman Catholic students in diploma and baccalaureate programs graduated in higher proportions than students with other or no religious preference.

Three biographical variables appeared to be related to graduation/withdrawal from nursing in all three types of nursing programs: ethnic group identification, family income as reported at the beginning of the study, and high school academic standing. However, nonwhite entrants and those who had been in the bottom half

Family background variables have been studied in relation to completion of college, and one investigator reports ". . . the college student who was most likely not to complete four years of college within the four years following matriculation was one who had relatively low grades in high school, who came from a relatively low socioeconomic background, and whose racial background was either American Indian or 'other' (*1*)." Jencks studied educational attainment, that is, number of years of school completed, at all levels (elementary, secondary, and postsecondary) and described both the influence of family background and difficulties in adequately measuring biographical characteristics: "We have shown that the most important determinant of educational attainment is family background. The impact of family background is accounted for partly by measurable economic differences between families and partly by more elusive non-economic factors." He then raises the question of correlation of cognitive skills and family characteristics: "Except for family background the next most important determinant of educational attainment is probably cognitive skill. The precise effect of cognitive skill is hard to determine, however, since we do not know to what extent test scores are a proxy for unmeasured noncognitive differences between home environments (*2*)."

One group of investigators in nursing stated: ". . . socioeconomic origins enter into successful completion of nursing education (*3*)." Although family income was related to graduation/withdrawal in this study, it should be recalled that among the associate degree and baccalaureate respondents, the lowest income students had the lowest rate of graduation, but among diploma students the highest income group had the lowest rate of graduation. It is possible that the variable "family income" measures differences in background not available to the study. Also, for only one group in the study, baccalaureate students, were all variables describing parents consistently related statistically to graduation/withdrawal. It may be possible that family background variables are more pertinent to completion of a 4-year college program than to the completion of a nursing program.

Prediction of success in nursing school, as determined by graduation from the program, and efforts to find means of discriminating possible withdrawals from nonwithdrawals have been studied in relation to cognitive and noncognitive variables (*4, 5, 6, 7*). High school academic standing has been documented as being a predictor of grades both in college and nursing schools (*8, 9, 10*). Self-reporting of grades correlates highly with school grade reports and is just as

useful as a predictor of college grades (*11*). Certainly participants in this study had a better chance of finishing any of the nursing programs if they reported having been in the upper fourth of their high school classes.

Less apparent in this study, and in most other studies dealing with graduation/withdrawal from nursing school, is just exactly what good high school grades imply. Do good secondary school grades mean that these students are more capable than others, or have learned how to succeed within the educational structure, or have learned what teachers expect of them, or are better motivated to succeed, or know how to study, or are more successful at passing tests, or a combination of all these factors and others? Perhaps high school grades are a well-documented predictor of grades in higher education because high school academic standing actually reflects a combination of many characteristics.

Although it is sometimes convenient to separate measures of cognitive development from other measurements, essentially this is fallacious. Anastasi describes the cumulative effect of personality on the direction and extent of an individual's intellectual development and states: "The relation between personality and intellect is reciprocal. Not only do personality characteristics affect intellectual development, but intellectual level also affects personality development. The success an individual attains in the development and use of his aptitudes is bound to influence his emotional adjustment, interpersonal relations and self-concept (*12*)." In spite of the fact that high school grades usually are good predictors of grades in postsecondary education, are grades in and of themselves predictors of graduation/withdrawal from nursing school? In this study, between 24.2 percent (diploma) and 37.7 percent (baccalaureate) of the students who had been in the top fourth of their high school class withdrew from the nursing program.

In one study of prediction of success in a collegiate program, in which a battery of instruments was used, a lower relationship was found between measures of intelligence and grade point average in nursing school than had been anticipated from studies among college students. The authors conjectured that this might have occurred with nursing students because clinical as well as academic skills contribute to collegiate nursing performance (*13*). Assigning grades to a student's performance in high school, nursing school, or any other school apparently measures something, but exactly what is being measured is open to question.

In an effort to reduce attrition rates, some nursing schools have instituted special programs to assist academically deficient students and/or students whose background and grades have grouped them

as "high risk" students. High risk students have been variously defined as students with low high school grades, students from nonwhite backgrounds, and those from low income families. Enrichment programs to assist such students usually have been a combination of tutorial and counseling services.

Carnegie studied disadvantaged students in one enrichment program and compared them with Nurse Career-Pattern Study participants in the low income group. As far as can be determined, none of the Nurse Career-Pattern Study participants had been in special programs. She found that 28.1 percent of the group who had received special help withdrew, as compared with 48.4 percent of disadvantaged Nurse Career-Pattern Study participants (*14*). One diploma school reduced attrition from the 45 to 50 percent range to 21 percent by a combined program of crisis intervention in times of stress, remedial tutoring, and motivational group meetings (*15*).

Two ongoing programs, ODWIN (Open the Doors Wider in Nursing) in Roxbury, Massachusetts, and Breakthrough to Nursing, administered by the National Student Nurses' Association, are concerned with both the recruitment and retention of disadvantaged students in nursing (*16, 17*). The Division of Nursing, U.S. Department of Health, Education, and Welfare, lists federally supported, special project grants awarded for improvement in nursing education during 1965 to 1970 (*18*). Among projects listed are a good number focused on the recruitment and retention of high risk or disadvantaged students. Other grants cover projects designed to reduce attrition. Some were one-time or limited studies; others have been continued with additional or other funding.

In this study, scholastic failure was the predominant reason for withdrawal for associate degree and diploma students, from the point of view of the director of the nursing program, followed by "no longer interested in nursing." When directors of baccalaureate programs were able to cite a reason, "no longer interested in nursing" had the highest proportion, followed by scholastic reasons. The same two predominant reasons were given by students but the proportions differed. The basis for identifying scholastic reasons for withdrawal was probably more readily accessible to the director of the school than information which might identify other reasons. In this study, "no longer interested in nursing" included all who may have stayed in school but changed their major from nursing to other disciplines. In some earlier studies, the group who transferred into other majors had been tabulated differently, and this may account for the difference in reasons for withdrawal between baccalaureate students in the Nurse Career-Pattern Study and those in other studies in which academic deficiency was generally first (*19*).

The reasons cited by both the director and respondents in the Nurse Career-Pattern Study do not differ greatly from reasons for withdrawal from nursing given in some other studies. Taylor reviewed studies from 1944 through the 1960's and found that academic failure was the number one reason, with marriage and dislike of nursing vying for second or third place, depending upon the study (*20*). The predominant reasons for nonacademic withdrawal in a study including all three types of nursing programs were marriage and/or pregnancy and "lost interest" in nursing (*21*). One diploma school of nursing found that emotional problems and the demands of the nurse's work role combined with a lack of basic academic skills accounted for most of their withdrawals (*22*). Montag mentions a rate of 47 to 50 percent leaving associate degree programs in nursing because of academic failure. However, she notes that this figure may be inflated since most community colleges will permit readmission and repetition of the course or courses failed (*23*). Among a group of women who left their college of matriculation, marriage was the major reason affecting their decision to leave college (*24*).

In this study, reason for withdrawal differed not only by year of withdrawal (especially among diploma and baccalaureate students) but also by marital status, ethnic group, family income, and high school academic standing.

A continued interest in nursing is suggested by the number of withdrawals in this study who reenrolled in nursing programs or who would have liked to return to nursing school. In addition, a good number who changed their career goals remained in the general area of health care or helping professions.

A continued interest in nursing by those who withdrew from nursing schools is found in two geographically localized studies (*25, 26*). Marriage, home responsibilities, and financial factors were cited by those who withdrew in the Nurse Career-Pattern Study as precluding their immanent return to nursing school. The implication is that it is important for nursing education programs to be geared to the needs of women at a time in their lives other than post-high school.

Just how important financial factors are in withdrawal from nursing school or in deterring return to nursing school is difficult to determine. The proportions of both directors or respondents who cited finances as the prime reason for withdrawal were low. But it was the one area of disagreement between directors and participants, with more participants citing finances. It is possible that the proportions were affected by asking for the primary reason for withdrawal and that finances were a contributing reason masked

had enough money and motivation, remedial work at some other school or program would be available. On the other hand, about half who returned the withdrawal questionnaire had married, and it is possible that the costs of further education (usually for the wife) were more than the young family could assume.

There are implications in the data that graduation/withdrawal rates differ by school characteristics, notably geographic location, financial support, and religious identification. Regional differences in attrition rates among schools of nursing were also found in earlier studies (*27, 28*). The wide range of proportions of those graduating within any single type of nursing program has been described; the inference is strong that there are differences in schools of a particular type, which go beyond geographic location. However, in the national study of colleges previously cited, regional differences have been noted as having an effect on students' completion of 4 years of college (*29*). Further investigation is needed to ascertain if regional differences are truly local sociocultural differences regarding higher education, differences in distributions of privately and publicly supported schools, both, or other as yet unidentified circumstances.

Variations in graduation rates, when examined by religious identification and financial support of the nursing school, undoubtedly, are related to admission requirements. Selection procedures vary among nursing schools and among types of programs. Institutional selectivity and the number of admissions completing a bachelors degree within 4 years after matriculation were related for a national sample of college students (*30*).

Taylor and associates point out that although some type of test and personnel instruments have been used since 1927 in the selection of nursing students "... the fact that grade point average and current tests do not predict well the practical aspects of nursing education ... and the fact that a large percentage of dropouts are due to nonacademic reasons make it imperative that other predictive measures be investigated (*31*)." Another group of investigators believe that graduation rates can be raised by coordinating screening procedures with amelioration of institutional factors contributing to attrition (*32*). At the present time there does not seem to be any means of determining if controlled admission to nursing schools by selective procedures results in a better prepared graduate or simply a lower attrition rate. Since many nursing schools are now operating under an "open admissions" policy or are legally mandated to accept all applicants, examination of institu-

even more essential than in the past.

One of the chief difficulties of such a study as the Nurse Career-Pattern Study is that, although a great deal of data are gathered about a great many participants, the study barely scratches the surface of the intertwined components of behavior in the phenomenon of graduation/withdrawal from nursing school. Also, with these types of data, a good many national characteristics and findings mask the importance of local differences. Variances among the schools in the proportions of those graduating from any one of the programs are evident. Any generalizations from these national data to a specific situation should be done cautiously. On the other hand, studies which have concentrated more deeply on certain aspects of graduation/withdrawal often comprise small samples from one type of program or school. The difficulties of generalizing from the specific to the total group are just as apparent.

One fact does seem certain however: students still withdraw from nursing school before graduation, and the proportions, when studied by type of program, have not changed appreciably over the years. Simply counting the numbers who graduate or withdraw from each class in each type of program does tell how many graduates can be expected in any given year, but it does not begin to approach understanding of the social and behavioral dynamics of leaving school before completion. Probably the problem of withdrawal from nursing school, if it is a problem, cannot really be solved until graduation/withdrawal is studied within the context of all human behavior.

From the perspective of the nursing school, the loss of each student may affect the economics of the school's functioning. Nursing education is expensive, more so than some other undergraduate programs. Also, most nursing education is sequential. If a student withdraws beyond preliminary classroom work, it is often not possible to fill the vacancy with a suitable candidate. Regarding diploma programs, Fagan comments: "Students (in a diploma program) are carefully selected through a combination of criteria including pre-entrance tests. ... Because the cost of educating nurses is high, the investment is completely lost when a student withdraws. ... Therefore, to avoid greater attrition, many schools accept smaller classes during periods of difficult recruitment, rather than diminish the level of academic ability acceptable for admission (*33*)."

Withdrawal before graduation may be perceived as a problem by schools of nursing which are preparing students for a specific occupational objective and find their purposes are thwarted by

professional and societal needs, has been striving to increase the number of graduates with each succeeding year. The general national economic picture of the beginning 1970's may influence more students to choose nursing, where jobs generally are still available after graduation, and also discourage students from transferring into other majors or leaving school before completion.

Little attention has been directed to withdrawal before graduation from the student's point of view. Probably, depending upon the circumstances precipitating withdrawal, leaving nursing school ranges from a feeling of failure to relief.

What all participants in this study have in common and what has not been a part of the data gathered is the process involved in becoming a successful or unsuccessful candidate for graduation from a nursing program. There are differences in curriculums among the three registered nurse programs, differences in proportions graduating among the schools in any one type of program, and biographical differences in the students who choose one program in preference to another. In spite of these differences, all schools of nursing have in common the education of students in certain basic areas. All students must learn whatever the particular school has determined is the theoretical background of nursing; all students must acquire basic nursing skills; all are in the state of being socialized into the student nurse's role and the nurse's role; all must acquire certain interpersonal skills necessary for successful clinical work; and, in addition, most students are faced with the psychological tasks of maturation of young adults. (In spite of the fact that a good many associate degree entrants were older and married, it should be remembered that the majority, even of this group, were young and single.) These formidable learning tasks are set before the typical post-high school student in the typical nursing school. Probably no other undergraduate course as nursing requires so much from students in the way of maturing behavior and personal development in addition to academic learning.

Disruptive or growth experiences in any one of the areas mentioned can contribute to withdrawal before graduation. Gunther, who studied one group of nursing students from a developmental point of view, found 71 percent of the study group had thought about dropping out, that there was high agreement that nursing was more difficult than teaching, social work, library science, or dental hygiene, but that 53 percent of the study group believed nursing was the only career that would really satisfy them (*34*).

The process of nursing education, set as it is within the dual institutions of school and clinical practice areas, places students in

two roles: learners and givers of service. Further, they are under the tutelage of school faculty and, to some extent, nursing service staff, which creates still another adjustment situation for undergraduates not found in other majors. Yet the process of nursing education, when successful, has many strengths not available in other types of undergraduate education. The eventual goal of becoming a nurse was so powerful for most students that this goal was sufficient explanation for coping with stressful situations and remaining in school when pressures seemed insurmountable, reports Fox (*35*). Formal and informal discussion and sharing of clinical practice experiences can build a powerful group consciousness and role identification among nursing students. Shared experiences become group property and assist both in validation of an individual's definition of the situation and building group cohesiveness. Nurses and nursing students are sometimes characterized as being unable to talk about little else than nursing. But it is difficult for those in other disciplines to appreciate the depth and intensity and the kind of learning and growth implicit in caring for and being with those who need the services you are able to render. Such experiences generally are not available to nonnursing undergraduates.

In fact, learning through doing and sharing, long a part of nursing curriculums, may be the coming vogue in all education. Comfort states: "The way to educate people is to encourage them to do, with the help of a master doer. The way to give them interdisciplinary insights is to give them disciplinary ones under a first-rate teacher whose insights are interdisciplinary." He continues to point out that academic institutions "childrenize" learners, and that a desirable byproduct of learning by doing is that it imposes responsibility upon the student from the very first day (*36*). A recent approach to higher education being tried in many small colleges is the application of the "competence level unit" as a measure of learning. This is an effort to redefine the goals of liberal education in terms of explicit practical skills or competences thought to be needed by an educated person in today's society (*37*). Nursing education programs, which have always been geared toward competency and performance, can offer their students, who are usually highly motivated, a most fruitful educational experience.

Simultaneously with the process of becoming nurses, nursing students are moving from young adulthood toward adult goals and roles. In their personal, social, and, to some extent, academic experiences, the common characteristic of both nursing and nonnursing students in one study was that "they were adolescent girls attending a post-high school educational program primarily for women (*38*)."

The data of the Nurse Career-Pattern Study show that older, married associate degree students graduated more frequently than younger, single students. Did these married students have a stronger motivation to complete the program or did the fact that they had met and solved some of the adult role demands of marriage and, in most cases parenthood, affect their chances of graduating? It might be hypothesized that young adults, and especially young women, will, of psychosocial necessity, endeavor to resolve areas of sexuality, marriage, and parenthood prior to emotional concentration on professional development and full commitment to a career. This could be viewed as positive growth for individuals but perhaps negative growth for professions, especially professions which are mostly women.

Recommendations

With the full knowledge that withdrawal from schools of nursing will never be entirely eliminated, some recommendations flow from the implications of this study's data.

For purposes of nursing manpower prediction and planning, there should be periodic assessment of biographical characteristics of first-time nursing students, followed by periodic assessment of graduation/withdrawal rates. This is especially necessary if diploma programs, which appear to serve a specific segment of the post-high school population and have the highest graduation rates, continue to close.

A study of selection procedures, as related to both student and institutional characteristics, should be undertaken. Schools might experiment with random selection of admissions from all applicants, and compare these applicants with those selected by more traditional methods.

Schools with a high proportion of students whose biographical characteristics imply the possibility of withdrawal before graduation need to explore the feasibility of enrichment programs, both tutorial and counseling, given possibly even before the applicant becomes a nursing student. Geographically, local as well as specific school studies should supplement national data for they are the only means of identifying specific students and institutional characteristics related to graduation/withdrawal for a particular school.

Those who leave nursing school for nonacademic reasons, primarily marriage, should be encouraged to plan a divided education. This would imply keeping knowledge updated and making credits for work completed easily transferable.

A better understanding of financial problems associated with withdrawal or reentry after withdrawal is needed.

Withdrawal before graduation needs to be understood and studied in the context of human behavior. For a woman's profession, this investigation would include the role of women in society and its relationship to the professional commitment.

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Appendix A

TABLES OF BIOGRAPHICAL CHARACTERISTICS OF ENTERING STUDENTS

Table A–1.—Sex of Nurse Career-Pattern Study participants, by type of program: all years combined

Sex	Associate degree		Diploma		Baccalaureate	
	No.	Pct.	No.	Pct.	No.	Pct.
Female	13,274	95.8	15,268	98.7	13,311	99.3
Male	578	4.2	200	1.3	99	0.7
Total	13,852	100.0	15,468	100.0	13,410	100.0

Table A–2.—Marital status of Nurse Career-Pattern Study participants at time of entrance to nursing school, by type of program: all years combined

Marital status at entrance	Associate degree		Diploma		Baccalaureate	
	No.	Pct.	No.	Pct.	No.	Pct.
Single	9,802	70.8	14,993	96.9	12,977	96.8
Married	3,260	23.5	306	2.0	243	1.8
Formerly married	683	4.9	78	0.5	82	0.6
Religious Brother/Sister	74	0.5	45	0.3	85	0.6
Unknown	33	0.2	46	0.3	23	0.2
Total	13,852	100.0	15,468	100.0	13,410	100.0

Table A–3.—Age of Nurse Career-Pattern Study participants at time of entrance to nursing school, by type of program: all years combined

Age at entrance	Associate degree		Diploma		Baccalaureate	
	No.	Pct.	No.	Pct.	No.	Pct.
16–17	1,507	10.9	3,602	23.3	2,675	19.9
18–19	6,297	45.5	10,106	65.3	8,921	66.5
20–24	2,377	17.2	954	6.2	1,194	8.9
25–34	1,644	11.9	213	1.4	133	1.0
35 and over	1,631	11.8	80	0.5	67	0.5
No response	396	2.8	513	3.3	420	3.1
Total	13,852	100.0	15,468	100.0	13,410	100.0

Table A–4.—Ethnic group of Nurse Career-Pattern Study participants, by type of program: all years combined

Ethnic group	Associate degree		Diploma		Baccalaureate	
	No.	Pct.	No.	Pct.	No.	Pct.
White	12,544	90.6	14,844	96.0	12,515	93.3
Black	987	7.1	442	2.9	728	5.4
Other	277	2.0	154	1.0	145	1.1
No response	44	0.3	28	0.2	22	0.2
Total	13,852	100.0	15,468	100.0	13,410	100.0

Table A-5.—Religious preference of Nurse Career-Pattern Study participants, by type of program: all years combined

Religious preference	Associate degree		Diploma		Baccalaureate	
	No.	Pct.	No.	Pct.	No.	Pct.
Roman Catholic	4,305	31.1	6,209	40.1	4,211	31.4
Christian not Roman Catholic	8,611	62.2	8,896	57.5	8,630	64.4
Jew	429	3.1	129	0.8	289	2.2
Other religions	49	0.4	42	0.3	30	0.2
No religion	271	2.0	92	0.7	160	1.2
No response	187	1.3	100	0.6	90	0.6
Total	13,852	100.0	15,468	100.0	13,410	100.0

Table A-6.—Family income of Nurse Career-Pattern Study participants at time of entrance to nursing school, by type of program: all years combined [1]

Reported income	Associate degree		Diploma		Baccalaureate	
	No.	Pct.	No.	Pct.	No.	Pct.
Below $5,000	2,804	20.2	3,415	22.1	1,947	14.5
$5,000–$9,999	5,920	42.7	7,022	45.4	4,844	36.1
$10,000–$14,999	2,878	20.8	2,764	17.9	3,390	25.3
$15,000 and over	1,083	7.8	842	5.4	1,819	13.6
Ambiguous or no response	1,167	8.4	1,425	9.2	1,410	10.5
Total	13,852	100.0	15,468	100.0	13,410	100.0

[1] Data gathered 1962, 1965, 1967.

Table A-7.—Occupations of fathers of Nurse Career-Pattern Study participants, by type of program: all years combined

Father's occupation	Associate degree		Diploma		Baccalaureate	
	No.	Pct.	No.	Pct.	No.	Pct.
Physician	165	1.2	149	1.2	461	3.4
Medically oriented professional and nonprofessional	309	2.2	293	1.9	413	3.1
Service including clergy	786	5.7	777	5.0	1,068	8.0
Professional or semi-professional [1]	1,557	11.2	1,580	10.2	2,536	18.9
Sales or clerical	2,837	20.5	3,597	23.2	3,074	22.9
Farmer or outdoor	1,125	8.1	1,340	8.6	991	7.4
Military officer or enlisted	237	1.7	255	1.6	433	3.2
Skilled worker	3,108	22.4	3,987	25.8	2,326	17.3
Semiskilled and unskilled	1,454	10.5	2,027	13.1	930	6.9
Not working or not identified	800	5.8	548	3.5	376	2.8
No response	1,474	10.6	915	5.9	802	6.0
Total	13,852	100.0	15,468	100.0	13,410	100.0

[1] Includes owner of large business and executive.

Table A–8.—Years of education of fathers of Nurse Career-Pattern Study participants, by type of program: all years combined

Father's education in years	Associate degree		Diploma		Baccalaureate	
	No.	Pct.	No.	Pct.	No.	Pct.
8 and under	2,735	19.7	2,873	18.6	1,511	11.3
9, 10, 11	2,152	15.5	2,879	18.6	1,482	11.1
12	3,993	28.8	5,071	32.8	3,763	28.1
13, 14, 15	2,397	17.3	2,577	16.7	2,586	19.3
16 and over	1,994	14.4	1,794	11.6	3,772	28.1
No response	581	4.2	274	1.8	296	2.2
Total	13,852	100.0	15,468	100.0	13,410	100.0

Table A–9.—Social index classification of fathers of Nurse Career-Pattern Study participants, by type of program: all years combined [1]

Father's social index	Associate degree		Diploma		Baccalaureate	
	No.	Pct.	No.	Pct.	No.	Pct.
One	612	4.4	529	3.4	1,357	10.1
Two	1,471	10.6	1,472	9.5	2,635	19.6
Three	2,169	15.7	3,220	20.8	2,846	21.2
Four	4,908	35.4	6,498	42.0	3,981	29.7
Five	1,307	9.4	1,713	11.1	808	6.0
Undetermined and no response	3,385	24.4	2,036	13.2	1,783	13.3
Total	13,852	100.0	15,468	100.0	13,410	100.0

[1] For derivation of social index, see text, page 9.

Table A–10.—High School academic standing of Nurse Career-Pattern Study participants, by type of program: all years combined

High school standing	Associate degree		Diploma		Baccalaureate	
	No.	Pct.	No.	Pct.	No.	Pct.
Top fourth	4,901	35.4	7,467	48.3	8,367	62.4
Second fourth	5,592	40.4	5,922	38.3	3,672	27.4
Third fourth	2,032	14.7	1,422	9.2	836	6.2
Bottom fourth	237	1.7	106	0.7	118	0.9
No response	1,090	7.9	551	3.6	417	3.1
Total	13,852	100.0	15,468	100.0	13,410	100.0

Table A–11.—Previous attendance at other nursing school by Nurse Career-Pattern Study participants, by type of Nurse Career-Pattern Study program: all years combined

Previous nursing school	Associate degree		Diploma		Baccalaureate	
	No.	Pct.	No.	Pct.	No.	Pct.
Previously attended	2,352	17.0	638	4.1	368	2.7
No previous school	11,500	83.0	14,830	95.9	13,042	97.3
Total	13,852	100.0	15,468	100.0	13,410	100.0

Table A–12.—Comparative location of high school and nursing school, by type of program: all years combined

Location of high school and nursing school	Associate degree		Diploma		Baccalaureate	
	No.	Pct.	No.	Pct.	No.	Pct.
Same State	10,872	78.5	12,868	83.2	10,334	77.1
Different State	2,470	17.8	2,472	16.0	2,915	21.7
Other or no response	510	3.7	128	0.8	161	1.2
Total	13,852	100.0	15,468	100.0	13,410	100.0

Table A–13.—Geographical region of nursing school which Nurse Career-Pattern Study participants were attending, by type of program: all years combined [1]

NLN region	Associate degree		Diploma		Baccalaureate	
	No.	Pct.	No.	Pct.	No.	Pct.
Region I North East	3,681	26.6	5,826	37.7	2,797	20.9
Region II Midwest	2,495	18.0	5,555	35.9	3,087	23.0
Region III South	2,759	19.9	3,187	20.6	4,297	32.0
Region IV West	4,917	35.5	900	5.8	3,229	24.1
Total	13,852	100.0	15,468	100.0	13,410	100.0

[1] For designation of regions, see table 8.

Table A–14.—Principal source of financial support of nursing school attended by Nurse Career-Pattern Study participants, by type of program: all years combined

Financial support	Associate degree		Diploma		Baccalaureate	
	No.	Pct.	No.	Pct.	No.	Pct.
Public	11,861	85.6	1,812	11.7	9,011	67.2
Private	1,991	14.4	13,656	88.3	4,399	32.8
Total	13,852	100.0	15,468	100.0	13,410	100.0

Table A-15.—For selected variables, weighted National Norms for freshman women, Fall 1967, and percentages [1] of Nurse Career-Pattern Study participants, Fall 1967, and all Nurse Career-Pattern Study samples combined

Variable	National Norms		Associate degree		Diploma		Baccalaureate	
	2-year college Pct.	4-year college Pct.	1967 Pct.	All Pct.	1967 Pct.	All Pct.	1967 Pct.	All pct.
Age:								
19 and under	92.4	98.5	50.9	56.4	87.2	86.6	84.5	86
20 and over	7.6	1.5	46.6	40.9	9.2	8.1	12.6	10
High school academic standing [2]:								
Top half (A, A–, B+, B, B–)	63.2	85.3	75.0	75.8	86.0	86.6	89.8	89
Bottom half (C+, C, D)	36.7	14.6	17.1	16.4	10.6	9.9	7.4	7
Ethnic group:								
White	87.3	89.0	90.6	90.6	96.2	96.0	91.9	93
Black	3.9	6.7	6.9	7.1	3.2	2.9	6.6	5
Other	8.8	4.1	2.2	2.0	0.4	1.0	1.4	1
Religious preference:								
Christian excluding Roman Catholic	49.3	51.8	60.3	62.2	54.7	57.5	61.0	64
Roman Catholic	33.1	33.8	32.8	31.1	43.2	40.1	34.7	31
Jewish	1.7	4.1	2.6	3.1	0.7	0.8	2.0	2
None	5.0	5.5	2.5	2.0	0.7	0.7	1.4	1
Estimated family income:								
Below $9,999	43.2	35.9	58.8	62.9	60.7	67.5	45.5	56
$10,000–$14,999	16.3	18.9	24.0	20.8	22.4	17.9	28.1	29
$15,000 and over	9.3	18.0	9.0	7.8	7.9	5.4	16.9	13

ble A–15.—For selected variables, weighted National Norms for freshman women, Fall 1967, and percentages [1] of Nurse Career-Pattern Study participants, Fall 1967, and all Nurse Career-Pattern Study samples combined

Variable	National Norms		Associate degree		Diploma		Baccalaureate	
	2-year college Pct.	4-year college Pct.	1967 Pct.	All Pct.	1967 Pct.	All Pct.	1967 Pct.	All pct.
::								
9 and under	92.4	98.5	50.9	56.4	87.2	88.6	84.5	86.4
0 and over	7.6	1.5	46.6	40.9	9.2	8.1	12.6	10.4
h school academic standing [2]:								
op half								
A, A–, B+, B, B–)	63.2	85.3	75.0	75.8	86.0	86.6	89.8	89.8
ottom half								
C+, C, D)	36.7	14.6	17.1	16.4	10.6	9.9	7.4	7.1
nic group:								
White	87.3	89.0	90.6	90.6	96.2	96.0	91.9	93.3
lack	3.9	6.7	6.9	7.1	3.2	2.9	6.6	5.4
ther	8.8	4.1	2.2	2.0	0.4	1.0	1.4	1.1
gious preference:								
hristian excluding Roman Catholic	49.3	51.8	60.3	62.2	54.7	57.5	61.0	64.4
oman Catholic	33.1	33.8	32.8	31.1	43.2	40.1	34.7	31.4
ewish	1.7	4.1	2.6	3.1	0.7	0.8	2.0	2.2
one	5.0	5.5	2.5	2.0	0.7	0.7	1.4	1.2
mated family income:								
elow $9,999	43.2	35.9	58.8	62.9	60.7	67.5	45.5	50.6
$10,000–$14,999	16.3	18.9	24.0	20.8	22.4	17.9	26.1	25.3
$15,000 and over	9.3	18.0	9.0	7.8	7.9	5.4	16.9	13.6

Table A–15.—For selected variables, weighted National Norms for freshman women, Fall 1967, and percentages[1] of Nurse Career-Pat Study participants, Fall 1967, and all Nurse Career-Pattern Study samples combined—continued

Variable	National Norms		Associate degree		Diploma		Baccalaureate	
	2-year college Pct.	4-year college Pct.	1967 Pct.	All Pct.	1967 Pct.	All Pct.	1967 Pct.	All pct.
Fathers education in years [3]:								
8 or under	14.3	8.8	19.2	19.7	16.5	18.6	10.4	1
9, 10, 11	22.0	13.3	16.1	15.5	17.7	18.6	11.1	1
12	31.1	27.4	29.0	28.8	35.6	32.8	28.5	2
13, 14, 15	17.4	18.7	17.0	17.3	16.4	16.7	19.1	1
16 and over	15.3	31.9	14.1	14.4	11.9	11.6	28.8	2

Source: National Norms for Entering College Freshmen, Fall 1967, A.C.E. Research Reports, Vol. 2, No. 7, 1967, American Council on Education, Washington, D.C. p.p. 21–25.

[1] Unweighted data. All percentages do not equal 100 percent due to exclusion of noncomparable subcategories and nonresponse.
[2] Nurse Career-Pattern Study categorized high school academic standing by fourths. National Norms by letter grade.
[3] Categories for National Norms are grammer school or less, some high school, high school graduate.

Table A–15.—For selected variables, weighted National Norms for freshman women, Fall 1967, and percentages[1] of Nurse Career-Pattern Study participants, Fall 1967, and all Nurse Career-Pattern Study samples combined—continued

Variable	National Norms		Associate degree		Diploma		Baccalaureate	
	2-year college Pct.	4-year college Pct.	1967 Pct.	All Pct.	1967 Pct.	All Pct.	1967 Pct.	All pct.
hers education in years [3]:								
or under	14.3	8.8	19.2	19.7	16.5	18.6	10.4	11.3
10, 11	22.0	13.3	16.1	15.5	17.7	18.6	11.1	11.1
2	31.1	27.4	29.0	28.8	35.6	32.8	28.5	28.1
3, 14, 15	17.4	18.7	17.0	17.3	16.4	16.7	19.1	19.3
6 and over	15.3	31.9	14.1	14.4	11.9	11.6	28.8	28.1

urce: National Norms for Entering College Freshmen, Fall 1967, A.C.E. Research Reports, Vol. 2, No. 7, 1967, American Council on Education, Washington, D.C. p.p. 21–25.

nweighted data. All percentages do not equal 100 percent due to exclusion of noncomparable subcategories and nonresponse.
urse Career-Pattern Study categorized high school academic standing by fourths. National Norms by letter grade.
ategories for National Norms are grammer school or less, some high school, high school graduate.

Table A-16.—Graduated/withdrew, by family income at entrance and type of program: 1962 group [1]

Status	Family income at entrance: Below $5,000 No.	Pct.	$5,000–$9,999 No.	Pct.	$10,000–$14,999 No.	Pct.	$15,000 and over No.	Pct.	Total No.	Pct.
Associate degree										
Graduated	348	58.1	618	60.7	208	56.5	73	59.8	1,247	59.2
Withdrew	251	41.9	400	39.3	160	43.5	49	40.2	860	40.8
Total	599	100.0	1,018	100.0	368	100.0	122	100.0	2,107	100.0
Diploma										
Graduated	1,028	65.6	1,684	70.6	522	66.7	148	65.2	3,382	68.1
Withdrew	540	34.4	702	29.4	261	33.3	79	34.8	1,582	31.9
Total	1,568	100.0	2,386	100.0	783	100.0	227	100.0	4,964	100.0
Baccalaureate										
Graduated	329	49.3	701	49.3	423	52.9	189	53.4	1,642	50.6
Withdrew	338	50.7	721	50.7	377	47.1	165	46.6	1,601	49.4
Total	667	100.0	1,422	100.0	800	100.0	354	100.0	3,243	100.0

[1] Excludes ambiguous and no response to income.

Table A-17.—Graduated/withdrew, by family income at entrance and type of program: 1965 group [1]

Status	Family income at entrance: Below $5,000 No.	Pct.	$5,000–$9,999 No.	Pct.	$10,000–$14,999 No.	Pct.	$15,000 and over No.	Pct.	Total No.	Pct.
Associate degree										
Graduated	658	56.1	1,481	62.1	636	59.9	244	58.1	3,019	59.9
Withdrew	515	43.9	903	37.9	426	40.1	176	41.9	2,020	40.1
Total	1,173	100.0	2,384	100.0	1,062	100.0	420	100.0	5,039	100.0
Diploma										
Graduated	777	67.0	1,922	70.7	722	70.8	177	65.1	3,598	69.6
Withdrew	382	33.0	795	29.3	298	29.2	95	34.9	1,570	30.4
Total	1,159	100.0	2,717	100.0	1,020	100.0	272	100.0	5,168	100.0
Baccalaureate										
Graduated	314	46.7	997	52.1	701	54.9	361	53.6	2,373	52.3
Withdrew	358	53.3	915	47.9	577	45.1	313	46.4	2,163	47.7
Total	672	100.0	1,912	100.0	1,278	100.0	674	100.0	4,536	100.0

[1] Excludes ambiguous and no response to income.

Table A-18.—Graduated/withdrew, by family income at entrance and type of program: 1967 group [1]

Status	Family income at entrance									
	Below $5,000		$5,000–$9,999		$10,000–$14,999		$15,000 and over		Total	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Associate degree										
Graduated	571	55.3	1,609	63.9	952	65.7	344	63.6	3,476	62.8
Withdrew	461	44.7	908	36.1	496	34.3	197	36.4	2,062	37.2
Total	1,032	100.0	2,517	100.0	1,448	100.0	541	100.0	5,538	100.0
Diploma										
Graduated	500	72.7	1,422	74.1	676	70.3	235	68.5	2,833	72.4
Withdrew	188	27.3	497	25.9	285	29.7	108	31.5	1,078	27.6
Total	688	100.0	1,919	100.0	961	100.0	343	100.0	3,911	100.0
Baccalaureate										
Graduated	291	47.9	879	58.2	809	61.8	480	60.7	2,459	58.3
Withdrew	317	52.1	631	41.8	501	38.2	311	39.3	1,760	41.7
Total	608	100.0	1,510	100.0	1,310	100.0	791	100.0	4,219	100.0

[1] Excludes ambiguous and no response to income.

Appendix B

RATE OF RETURN OF QUESTIONNAIRES

Table B–1.—Response to questionnaire of graduates, by program and year of entrance

Questionnaires (Q 2)	1962 No.	1962 Pct.	1965 No.	1965 Pct.	1967 No.	1967 Pct.	Total No.	Total Pct.
Associate degree								
Returned	1,287	96.3	3,163	96.3	3,421	90.7	7,871	93.8
Not returned	49	3.7	122	3.7	351	9.3	522	6.2
Total sent	1,336	100.0	3,285	100.0	3,772	100.0	8,393	100.0
Diploma								
Returned	3,621	98.2	3,852	96.8	2,962	95.1	10,435	96.8
Not returned	68	1.8	126	3.2	151	4.9	345	3.2
Total sent	3,689	100.0	3,978	100.0	3,113	100.0	10,780	100.0
Baccalaureate								
Returned	1,800	96.4	2,374	90.9	2,422	89.3	6,596	91.7
Not returned	68	3.6	238	9.1	290	10.7	596	8.3
Total sent	1,868	100.0	2,612	100.0	2,712	100.0	7,192	100.0

Table B–2.—Response to questionnaire by those who withdrew, by program, and year of entrance

Questionnaires	1962 No.	1962 Pct.	1965 No.	1965 Pct.	1967 No.	1967 Pct.	Total No.	Total Pct.
Associate degree								
Returned	647	68.3	1,702	76.0	1,609	70.9	3,958	72.5
Not returned	300	31.7	540	24.0	661	29.1	1,501	27.5
Total sent	947	100.0	2,242	100.0	2,270	100.0	5,459	100.0
Diploma								
Returned	1,424	80.6	1,387	79.7	909	77.0	3,720	79.4
Not returned	343	19.4	354	20.3	271	23.0	968	20.6
Total sent	1,767	100.0	1,741	100.0	1,180	100.0	4,688	100.0
Baccalaureate								
Returned	1,360	74.2	1,337	54.8	1,249	64.1	3,946	63.5
Not returned	472	25.8	1,102	45.2	698	35.9	2,272	36.5
Total sent	1,832	100.0	2,439	100.0	1,947	100.0	6,218	100.0

Appendix C

HYPOTHETICAL MODEL OF GRADUATION/ WITHDRAWAL FROM RN PROGRAMS AND LABOR FORCE BEHAVIOR OF RNs AFTER GRADUATION BASED ON STUDY FINDINGS

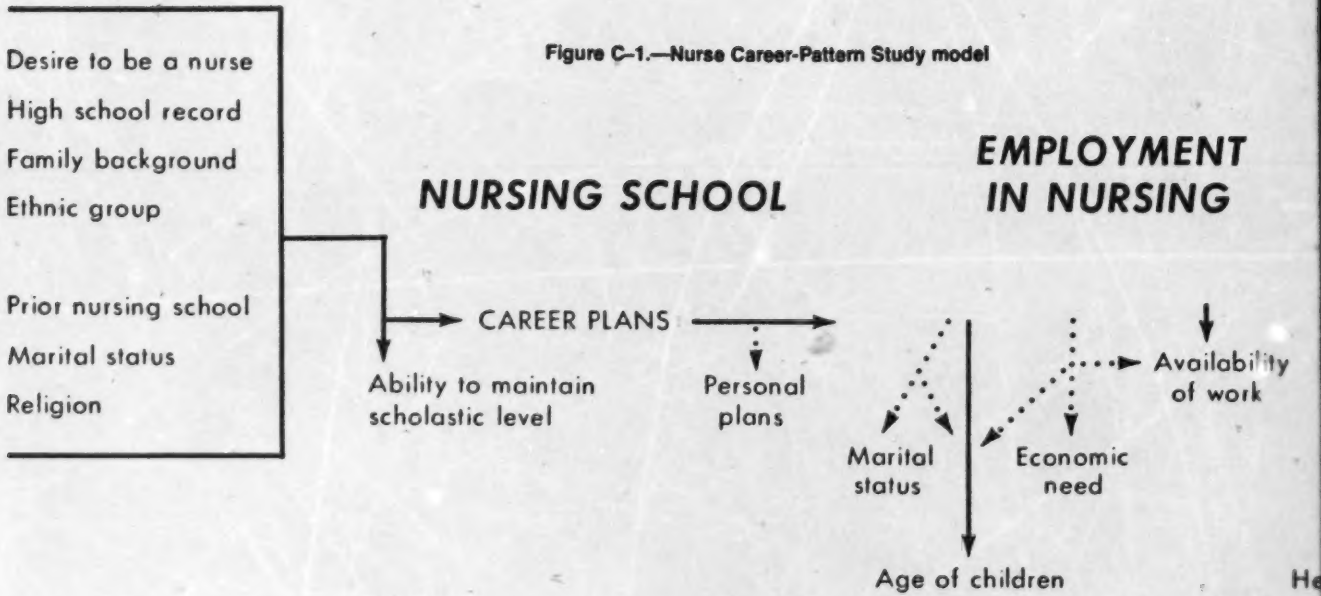

Figure C–1.—Nurse Career-Pattern Study model

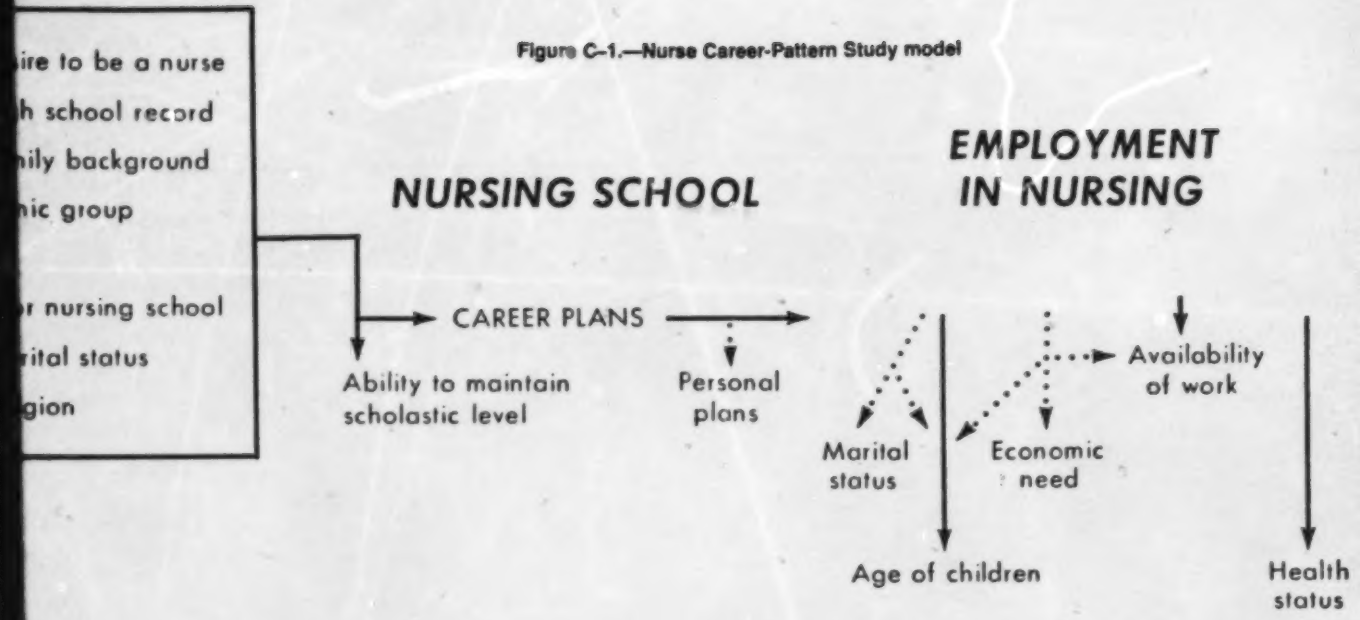

Figure C–1.—Nurse Career-Pattern Study model

Appendix D

QUESTIONNAIRES USED FOR GRADUATES AND WITHDRAWALS

☆U.S. GOVERNMENT PRINTING OFFICE: 1976 O—213-039

2603

NATIONAL LEAGUE FOR NURSING
RESEARCH AND STUDIES SERVICE Ident. No._____

NURSE CAREER-PATTERN STUDY

Name:_____ Female ☐ Male ☐ 15-
(Please Print)

Address:_____ Single ☐ Married ☐ Widow ☐ Div. ☐ Sep. ☐ 16-

_____ No. of Children:___ 17-

Part I:

When you left the nursing program, in what year of the program were you enrolled?

1st yr. ☐ 2nd yr. ☐ 3rd yr. ☐ 4th yr. ☐ 5th yr. ☐ 18-

Did you work for pay at any time when you were enrolled in school to study nursing?

Yes ☐ No ☐ 19-

If yes, approximately what were your total earnings? $100 or less ___ 20-
101 to 500 ___
501 to 1,000 ___
over 1,000 ___

What kind of work did you do?_____ 21-22-

By whom were you employed?_____ 23-

Did you receive a scholarship to help pay for your nursing education? Yes ☐ No ☐ 24-

If yes, approximately what was the total amount of scholarship help? 25-
$100 or less ___
101 to 500 ___
501 to 1,000 ___
over 1,000 ___

Did you borrow any money to help pay expenses resulting from attending the school of nursing? Yes ☐ No ☐ 26-

If yes, approximately what was the total amount of the loan(s)?

Federal Nurse Training Act		Other	
$100 or less ___	and/or	$100 or less ___	27-
101 to 500 ___		101 to 500 ___	28-
501 to 1,000 ___		501 to 1,000 ___	
over 1,000 ___		over 1,000 ___	

What was the one main reason for your leaving the nursing program?
(Check only one)

____ Scholastic failure
____ No longer interested in nursing as a career
____ Considered by faculty to be unsuited for nursing
____ Marriage
____ Pregnancy
____ Family or personal problems
____ Financially unable to continue
____ To enter another nursing program
____ Poor health
____ Other_____

29-
30-
31-
32-

Part II:

Have you enrolled in any other nursing program since leaving the program indicated in Part I? Yes ☐ No ☐ 33-

If yes, what type of nursing program?

- ☐ Practical or vocational
- ☐ Associate degree or community college 34-
- ☐ Hospital diploma
- ☐ Baccalaureate or college

What is your present status regarding the above program?

- ☐ Have graduated
- ☐ Am still enrolled 35-
- ☐ Withdrew
- ☐ Other (specify)_____

Have you attended any other educational program since leaving the nursing program? Yes ☐ No ☐ 36-

If yes, what was your major subject of study or training?_____ 37-
_____ 38-

Are you employed at the present time? Yes ☐ No ☐ 39-

If yes, what type of work are you doing? Check the one that best describes your work: 40-

- ___ 1. Registered professional nurse
- ___ 2. Licensed practical or vocational nurse
- ___ 3. Nursing aide, orderly, nursing assistant, psychiatric aide, or similar position
- ___ 4. Technical or professional work in or related to the health field, i.e., hospital laboratory technician, sanitarian, X-ray technician, physical therapy, occupational therapy, dental hygiene
- ___ 5. Clerical or accounting type of work in a hospital, nursing home, clinic or doctor's office, infirmary or health service
- ___ 6. Teacher in a public or private school, college, or university
- ___ 7. Social welfare type of work not for a hospital, nursing home, or clinic
- ___ 8. Some other type of employment (Please specify)

_____
_____

If you have not already done so, would you like to return to nursing school? 41-
Yes ☐ No ☐

If yes, what is the one main reason you have not yet returned to nursing school?

- ☐ Scholastic requirements
- ☐ Financial requirements
- ☐ Marriage and home responsibilities 42-
- ☐ Health reasons
- ☐ Other (Specify)_____

Form Approved Budget Bureau No. 68-R557

Q2 **Questionnaire for Associate Degree and Diploma Graduates** 2601 5 6 7 8 9 10 11 12 13 14

NATIONAL LEAGUE FOR NURSING
Research and Studies Service

CAREER-PATTERN STUDY

Name: _____ (Please Print)

Single ☐ Mar. ☐ Widow. ☐ Div. ☐ Sep. ☐ (Please check one) 15

Permanent Address: _____

Number of Children: _____ 16 17

_____ (City) _____ (State)

Social Security Number: _____

Name and address of person who would forward mail if you move during the next year:

Name: _____ (Please Print)

Street: _____

City: _____ State: _____

If married, husband's (wife's) occupation: _____ 18 19

Husband's (wife's) employer: _____ 20 21

Highest number of years of school husband (wife) completed (circle appropriate number):

under 8, 8, 9, 10, 11, 12, 13, 14, 15, 16, over 16 22 23 24 25

Do you plan to continue to do nursing work while married? _____

Do you now plan to seek further educational preparation in nursing after graduation from this program? 26 27 28 29 30 31 32

a. If yes, where would you like to go for this preparation? _____

b. If yes, how do you expect to pay for this further preparation (check only one)? 33 34

- Scholarship or fellowship ☐
- From personal or family savings ☐
- By money earned working as a nurse ☐
- Scholarship and savings ☐
- Savings and earnings ☐
- Scholarship and earnings ☐
- Scholarship, savings, and earnings ☐
- None of the above ☐

Check the clinical field in which you now think you would like to work at the four times listed: 35 36 37 38

	1 yr. after graduation	5 yrs. after graduation	10 yrs. after graduation	15 yr. after graduation
Medical Nursing				
Surgical Nursing				
Maternity Nursing				
Child Nursing				
Psychiatric Nursing				
General Nursing				
Health field, but not nursing (specify)				
Other (specify)				

39 40 41 42

Check the type of employer for whom you now think you would like to be working at the four times listed:

	1 yr. after graduation	5 yrs. after graduation	10 yrs. after graduation	15 yrs. after graduation	
Hospital					
Nursing Home					
Public Health Agency					43
School (school nurse)					44
School of Nursing (teaching)					45
Industry					46
Individual (private duty)					
Doctor, Dentist, etc.					
Other (specify)					

What type of position do you wish to have at the following four times:

	1 yr. after graduation	5 yrs. after graduation	10 yrs. after graduation	15 yrs. after graduation	
Staff Nurse					
Private Duty Nurse					
Head Nurse					
Supervising Nurse					47
Teacher of Nurses					48
Administrator of Nursing					49
Consultant in Nursing					50
Research in Nursing					
Other (specify)					

Did you work for pay at any time since you entered this school to study nursing? Yes ☐ No ☐ 51

If yes, approximately what were your TOTAL earnings? 52

- $100 or less ☐
- $101 to $500 ☐
- $501 to $1,000 ☐
- over $1,000 ☐

53

What kind of work did you do? _____ 54

By whom were you employed? _____ 55

Did you receive a scholarship to help pay for your nursing education? Yes ☐ No ☐

Was this scholarship from the Government (Federal, State, or Local Government)? Yes ☐ No ☐ 56

Give approximate TOTAL amount of all scholarship assistance: 57

- Less than $500 ☐
- $501 to $1,000 ☐
- $1,001 to $1,500 ☐
- $1,501 to $2,000 ☐
- over $2,000 ☐

Did you borrow any money to help pay expenses resulting from attending the school of nursing? Yes ☐ No ☐

Was this money borrowed under the provisions of the Federal Nurse Training Act? Yes ☐ No ☐ 58

Give approximate TOTAL amount of all loan assistance: 59

- Less than $500 ☐
- $501 to $1,000 ☐
- $1,001 to $1,500 ☐
- $1,501 to $2,000 ☐
- over $2,000 ☐

NLN/BLT
DENTA - 15

Q2

Questionnaire for Baccalaureate Graduates

2601
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NATIONAL LEAGUE FOR NURSING
Research and Studies Service

CAREER-PATTERN STUDY

Name: _____ (Please Print)

Single ☐ Mar. ☐ Widow. ☐ Div. ☐ Sep. ☐ (Please check one) 15

Permanent Address: _____

Number of Children: _____ 16 17

_____ (City) _____ (State)

Social Security Number: _____

Name and address of person who would forward mail if you move during the next year:

Name: _____ (Please Print)

Street: _____

City: _____ State: _____

If married, husband's (wife's) occupation: _____ 18 19

Husband's (wife's) employer: _____ 20 21

Highest number of years of school husband (wife) completed (circle appropriate number):

under 8, 8, 9, 10, 11, 12, 13, 14, 15, 16, over 16 22 23

Do you plan to continue to do nursing work while married? _____ 24 25

Do you now plan to seek further educational preparation in nursing after graduation from this program? 26 27

a. If yes, where would you like to go for this preparation? _____ 28 29 30 31 32

b. If yes, how do you expect to pay for this further preparation (check only one)?

- Scholarship or fellowship ☐
- From personal or family savings ☐
- By money earned working as a nurse ☐
- Scholarship and savings ☐
- Savings and earnings ☐
- Scholarship and earnings ☐
- Scholarship, savings, and earnings ☐
- None of the above ☐

33 34

Check the clinical field in which you now think you would like to work at the four times listed: 35 36 37 38

	1 yr. after graduation	5 yrs. after graduation	10 yrs. after graduation	15 yrs. after graduation	
Medical Nursing					
Surgical Nursing					
Maternity Nursing					
Child Nursing					39
Psychiatric Nursing					40
General Nursing					41
Health field, but not nursing (specify)					42
Other (specify)					

Check the type of employer for whom you now think you would like to be working at the four times listed:

	1 yr. after graduation	5 yrs. after graduation	10 yrs. after graduation	15 yrs. after graduation	
Hospital					
Nursing Home					
Public Health Agency					43
School (school nurse)					44
School of Nursing (teaching)					45
Industry					46
Individual (private duty)					
Doctor, Dentist, etc.					
Other (specify)					

What type of position do you wish to have at the following four times:

	1 yr. after graduation	5 yrs. after graduation	10 yrs. after graduation	15 yrs. after graduation	
Staff Nurse					
Private Duty Nurse					
Head Nurse					47
Supervising Nurse					48
Teacher of Nurses					49
Administrator of Nursing					50
Consultant in Nursing					
Research in Nursing					
Other (specify)					

Did you work for pay at any time since you entered this school to study nursing? Yes ☐ No ☐ 51

If yes, approximately what were your TOTAL earnings? $100 or less ☐ $101 to $500 ☐ $501 to $1,000 ☐ over $1,000 ☐ 52

What kind of work did you do? _____ 53 54

By whom were you employed? _____ 55

Did you receive a scholarship to help pay for your nursing education? Yes ☐ No ☐

Was this scholarship from the Government (Federal, State, or Local Government)? Yes ☐ No ☐ 56

Give approximate TOTAL amount of all scholarship assistance: Less than $1,000 ☐ $1,001 to $1,500 ☐ $1,501 to $2,000 ☐ $2,001 to $2,500 ☐ $2,501 to $3,000 ☐ $3,001 to $3,500 ☐ $3,501 to $4,000 ☐ over $4,000 ☐ 57

Did you borrow any money to help pay expenses resulting from attending the school of nursing? Yes ☐ No ☐

Was this money borrowed under the provisions of the Federal Nurse Training Act? Yes ☐ No ☐ 58

Give approximate TOTAL amount of all loan assistance: Less than $1,000 ☐ $1,001 to $1,500 ☐ $1,501 to $2,000 ☐ $2,001 to $2,500 ☐ $2,501 to $3,000 ☐ $3,001 to $3,500 ☐ $3,501 to $4,000 ☐ over $4,000 ☐ 59

NLN/BLT
DENTA - 15